Effective Designs for the Administration of Federal Elections

Section 1: Introduction

June 2007

U.S. Election Assistance Commission

Contents

The role of design in election materials

Effective information design—design that is based on usability, clarity, and accuracy—is critical to the success of materials and objects whose intent is to communicate complicated ideas to the people who use them. As simple as highway signs may appear to be, lengthy studies of color, type size and arrangement, and materials have been completed to ensure their clarity and ease of use. Airport signs rely on similar information design principles to effectively communicate to international audiences. The design of an airplane safety card is critical; even the design of the nutrition label, now required on all food packaging, has helped present complex information clearly and allowed people to gain a better understanding of their diet. In these examples, effective information design is critical to their success.

Election officials, The Election Assistance Commission (EAC) and the Design for Democracy team (as contractor to the EAC) share the same objective in terms of developing a means for achieving a voting experience that attracts citizens to vote; makes the choice of candidates and issues relatively easy; and ensures that voters cast their votes with confidence that they have made the right choice and that it has been registered properly. The benefit of these guidelines for the election official is that they draw on professional information design experience, research, testing, and evaluation to provide examples of approaches that are likely to be most successful. To this extent they complement and support the challenges election officials face.

Best practices for the design of election materials

In 2005, the EAC awarded Design for Democracy (contractor) a research and design contract to identify a series of voluntary best practices for voter information materials and ballots.

The best practices specified in this document support election reform requirements for ballot design and publicly posted voting information—as mandated by sections 241(b)(2) and 302(b) of the 2002 Help America Vote Act (HAVA). These sections include:

— Ballot designs for elections for Federal office.

— Public posting of sample ballots on Election Day.

— Public posting of election date and hours on Election Day.

— Public posting of voting instructions, including for provisional ballots, on Election Day.

— Public posting of instructions for first-time voters and mail-in registrants on Election Day.

— Public posting of voting rights, including provisional ballot rights, official contacts for suspected rights violations, and legislative information on misrepresentation and fraud on Election Day.

The best practice samples shown in sections 2 through 5 are based on 2005 Voluntary Voting System Guidelines (VVSG) and Americans with Disabilities Act (ADA) guidelines, research findings, and information design principles.

One size does not fit all when it comes to the electoral process. The U.S. Constitution gives the authority to each State to administer elections for its citizens. While certain processes may make sense in some States, they may not apply in others. The best practice designs recommended in this document offer plausible directions for election officials interested in prioritizing voter needs with consideration for their local administrative and vendor capabilities.

Compliance with best practice recommendations by election administrators is voluntary.

Solutions in this document support voters capable of interacting with traditional inputs. Initial recommendations for further study to support specific accessibility needs are included with design specifications.

High-level recommendations

1 Review best practice materials to gauge their specific, local value

Officials and their production teams are encouraged to compare these best practice prototypes with their local templates to (1) identify the variances between them, (2) determine how new practices could be adopted for use, and (3) create a revised election design work plan which might include new contributors, production steps, timelines, etc. Planning tables are included in sections 2 through 5 for reference in developing a revised work plan.

2 Read and work with best practice templates

The design systems specified in this document offer adaptive flexibility to election officials interested in incorporating them. All design templates are templates—most of the included content is variable (sample ballot data are supplied by the National Institute for Standards and Technology (NIST)), while design components are to be reviewed as a successfully researched set. While some voter information materials may already comply with local requirements, election officials should be prepared to refine and edit templates to accommodate their specific needs. All templates are available in editable formats for election officials and their design and production partners at www.eac.gov.

3 Identify election design contributors

Professional designers and writers with simple-language writing skills are ideally suited to help election officials adapt best practice specifications for their use. Cultural experts and translators are likewise positioned to offer the best production advice for including alternate languages. Election officials should recruit these resources with deep subject matter knowledge to augment their core team's capabilities.

4 Manage a collaborative workflow and production process

As mentioned in recommendation 1, the adoption of ballot and voter information design best practices relies on clear communication and successful collaboration with all production stakeholders—ballot manufacturers, printers, designers, writers, legislators, etc. Advanced planning with each resource to identify all goals, constraints, and requirements beforehand will support greater implementation success during an election.

An election official's viewpoint

Redesigning election materials is like the first few steps in a 12-step program. First, you have to admit you have a problem. Then, you need to ask for help. And you need to act on it.

That's why the best practices contained within this document are so useful. The EAC took the guesswork out of how to improve election materials. With these design templates elections officials can use them easily, including modifying language to meet local requirements, and follow good design principles.

John Lindback, Director of Elections, Oregon

Methodology

To meet the requirements of the project, the development team followed an iterative research-design-evaluate process focused on gathering qualitative data from three core research audiences (voters, election officials, and subject matter experts with accessibility and/or election backgrounds) to collect findings, design best practice prototypes, and draft specifications.

Input from manufacturers of voting technologies was also sought—ultimately, collaboration with just one national vendor, Election Systems & Software (ES&S), was provided in the context of a 2006 General Election pilot study the contractor conducted in Nebraska (see Research report, section 6). Without partnering directly with voting manufacturers, best practice recommendations are limited to interface design solutions—audio design and physical design solutions, specifically, are not addressed for audiences requiring them.

Data from the project's nine formal research events are documented in the section 7 Research report. In summary, the range of research activities included:

— *Observing elections.* In 2006, the contract team observed primary elections in two New Jersey jurisdictions (rural and urban). They also observed general elections in two of Nebraska's rural counties while pilot testing localized optical scan ballots and voter information prototypes.

— *Conducting field interviews.* Conversations were conducted with election officials in their work environments when possible. Informal interviews with poll workers and election staff at primary and general elections also informed our decisions.

— *Consulting experts.* Input from a variety of language, literacy, usability, accessibility, and production experts representing a range of voter interests was collected. Election officials with both State and local responsibilities representing populations diverse in culture, language, population density, and income were interviewed. For production insights, the research team contacted the largest domestic manufacturers of commonly used election equipment. Alternate language studies addressed usability and readability needs for single- and dual-language prototypes.

— *Reviewing legacy and in-use materials.* Ballot examples from the United States and overseas were studied to understand how common challenges, particularly low-literacy issues, are addressed.

— *Conducting usability evaluations.* The contract team held 54 usability evaluations with voters in seven States using prototype samples in interview settings. In-context voting feedback revealed how users actually thought and behaved while interacting with evaluation materials.

— *Focusing on prevalent voting technologies.* Specifications for optical scan and direct-recording electronic (DRE) ballot formats, and a voter information system exceeding minimum HAVA requirements, have been detailed in this report. By extension, single-language full-face ballot specifications were implemented based on optical scan research findings.

— *Soliciting public comments.* Drafts of this document were made available to and reviewed by an expert panel and the general public.

How to use this document

Samples and templates
The best practice samples for the design of ballots and voter information materials can be found in sections 2 through 5. Election officials should refer to the table of contents for a detailed list.

Each of these sections contains samples of best practice designs and written specifications to enable an information designer to recreate them without the use of templates, although digital files for all samples can be downloaded at www.eac.gov. These files exist in two formats: (1) a noneditable Acrobat PDF format, and (2) an Adobe InDesign template that can be updated by an information designer.*

Instructions on how to work with the digital files are provided in each section.

Election officials are encouraged to partner with their vendors and production team to review the voluntary design recommendations in this document, which produce election materials that support HAVA and 2005 Voluntary Voting System Guidelines (VVSG).

Research
Detailed research reports can be found in sections 6 and 7. Section 6 details a pilot test of the optical scan ballot and voter information materials. Section 7 details the usability testing and research supporting the design of all samples.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.

Effective Designs for the Administration of Federal Elections

Section 2: Voter information materials

June 2007

U.S. Election Assistance Commission

Voter information

This section has three parts: (1) planning process information; (2) illustrations of one-language voter information design best practices; and (3) illustrations of two-language voter information design best practices.

Planning
The Planning section (pages 2.4–2.7) outlines how to incorporate resources into the voter information development and production process; in what areas those resources may be of assistance; and when those activities should occur. Also included is a production table listing all the voter information materials by name, item ID number, those that are required by the 2002 Help America Vote Act (HAVA), estimated costs and production times, and which production methods and materials are "greener."

Design
Best practices are illustrated for both one-language (page 2.8) and two-language materials (page 2.32). These samples are accompanied by production specifications and discussion notes.

Electronic versions of these files are available at www.eac.gov, and specific instructions on how to use the electronic files are included on pages 2.8 and 2.32. The electronic files are available in two formats, one of which can be edited.

Election officials are encouraged to partner with their vendors and production partners to review the voluntary design recommendations in this document as early as possible in their planning activities.

Voter information audience
This section details solutions for voters able to use standard printed materials. Content, written in simple language, supports comprehension by voters at a third-grade reading level.

These best practices support 2005 Voluntary Voter System Guidelines (VVSG) and Americans with Disabilities Act (ADA) requirements for temporary displays.

Important areas of further study include voter information solutions for alternative technologies.

Suggestions for best practices

The general election voter information prototypes shown on the following pages are based on 2005 Voluntary Voting System Guidelines (VVSG), Americans with Disabilities Act (ADA) guidelines, research findings, and information design principles.

— Emphasize voter needs over administrative and vendor requirements.

— Use simple language for all content. Studies show that clear and concise writing is beneficial to voters of all literacy levels. Rewriting ballot instructions and voter information materials using simple language increases usability and, on the voter's behalf, accuracy.

— Use one language per item. To meet usability standards, display no more than two languages simultaneously.

— Use upper- and lowercase sans serif type, set left aligned at the sizes outlined in the specifications, for readability. Avoid setting text in a centered alignment. Avoid setting text in all capital letters. Minimize the number of fonts used.

— Use color functionally to emphasize important information and processes. The use of color cannot be the sole means of conveying information or making distinctions. Another non color mode must complement color use, such as contrast, icon, text style, etc. (see VVSG).

— When clarifying instructions and processes, use accurate diagrams to describe voting technology and equipment.

— Use instructional icons only. Universally recognized icons such as arrows are acceptable and encouraged.

Research findings

Detailed findings that support voter information design best practices can be found in section 6 and section 7.

Planning process

The planning table on the following page outlines additional resources and steps that can be taken to ensure that ballot content and design best address voter needs.

Planning goals
These additional resources can help ensure that:

— Content is easily understood by voters, including those with low vision and literacy issues.

— The visual organization and presentation of the content supports ease of use and confidence in the process.

— Any necessary translations are accurate and sensitive to cultural differences in language and expression.

Planning value by role/resource (page 2.5)

— S*imple-language expert* ensures that instructions and other ballot content are written in the most effective manner to help all voters (not just low-literacy voters) understand and follow instructions, and feel confident that they have properly cast their ballots.

— *Information designer* organizes the ballot content—text, graphics, illustrations—in a manner that is clear, simple, and functional, and that supports and enhances the voter's comprehension of the content and voting process. (Note: The design field is very broad; it is important to work with a designer who has expertise in the organization and presentation of complex information.)

— *Usability expert* works with the information designer to develop review, testing, and revision processes that improve the overall effectiveness, accuracy, and usability of materials.

— *Translator* ensures proper grammatical, syntactic, and structural character of the content, and appropriate use of local dialect variations. Accurate translations are vital for non-English-speaking voters. Using online translations can be misleading, unclear, or simply wrong (for Spanish translations, see the Election Assistance Commission (EAC) document "Glossary of Key Election Terminology, English-Spanish, 2007").

— *Cultural expert* reviews translated material to ensure that translations are accurate and culturally relevant, and that their visual presentation is appropriate.

Production planning table (pages 2.6–2.7)
This table provides decision support for the production of voter information materials by election officials. The complete voter information system has been organized vertically by production format (banners, table signs, etc.). Printing decisions, running horizontally at top, provide managers with a planning and execution framework.

More sustainable, or "green" reproduction options are color-coded ( ). They may be more financially advantageous than less sustainable solutions for a given jurisdiction. Cost, process, fabrication and production schedules, and storage data were provided by vendors and manufacturers.

Production time/cost requirements cited are used as examples. Election officials will need to request and negotiate actual estimates with their vendors.

Production steps before election cycle		
Resources	*Planning, design, and usability activities*	*Tips*
1. Election Official	Use the current election to establish a baseline for future work. Get voter feedback before starting, not just afterward. Establish an approval process/team. Determine who must sign off on improvements at each phase.	
2. Election Official	Choose an objective, professional resource to take ownership of information design challenges. Simultaneously hire a designer and a usability professional who can offer additional feedback. Partner with a policy advisor who can help guide design improvements through the necessary legislative processes.	Whenever possible, hire a local person who will be able to meet with officials and the extended production team (vendors, printers, etc.). Provide the designer with poll worker training, as well as any feedback from voters or poll workers. Provide the designer with a complete list of current election documents and legal requirements.
3. Designer and Usability Expert	Review and become familiar with election design standards and recommendations. Understand variance between EAC best practices and local requirements for poll worker and voter materials.	
4. Election Official	Estimate value of design improvements. Gauge impact of the redesign process during the next election planning cycle.	

Resources during election cycle		
Resources	*Content development activities*	*Tips*
Simple-Language Expert	Edit final English-language content for low-literacy voters.	
Translator	Translate content for non-English-speaking voters.	Understand the translator's requirements before the election: data formats, time line, etc. Have a third-party expert review the translated materials after the initial draft. Legal advisors may need to review the materials after simple language and design have been incorporated.
Alternative Language/ Cultural Expert	Review translated content in each alternative language for cultural relevancy.	Translation services may not be aware of possible cultural sensitivities of translated material.
Designer	Election official provides designer with final content for different materials, in English and other languages, after they have been reviewed by simple language and cultural experts.	

Mandate	Item	File ID#	Display method	Paper options	Recommended vendor options
HAVA	Voters' Bill of Rights	010	Use retractable banner stand with storage bag (approx. $95) *or* portable stand (approx $60; no storage bag)	PVC-free synthetic paper	Offset printer
HAVA	General information (voting violations)	020			
HAVA	Special voting rules	030		Ecological banner fabric	Digital print vendor
HAVA	Voting instructions	040			
	Vote here banner vertical	170	Use banner stand *or* hang with ties (grommets required)	30% postconsumer waste recycled text stock	Digital print vendor
	Vote here banner horizontal	180		Vinyl	Digital print vendor
HAVA	Sample ballot (door format)	051	Tape to door	PVC-free synthetic paper	Offset printer
HAVA	Sample ballot (wall format)	053	Tape to wall		
HAVA	Sample ballot (tabletop format)	052	Stand on tables (folded cards)		
HAVA	Voting instructions (tabletop format)	042		100% postconsumer waste recycled stock	Offset printer
	Information (tabletop format)	132			
	Vote by paper ballot (tabletop format)	142			
	Vote by touchscreen (tabletop format)	152		Generic card stock	Digital print vendor
	Return ballot (tabletop format)	162			
	Voters' Bill of Rights (binder format)	011	Add to binder	PVC-free synthetic paper	Offset printer
	Voting violations and penalties (binder format)	021	Add to binder		
	Voting instructions (booth format)	041	Tape inside voting booth		
HAVA	Polling place information	060	Tape to door/wall		
HAVA	Precinct identification	070			
	Vote here	080		100% postconsumer waste recycled text stock	In-office color ink jet printer
	Election official stickers	090	Stick on poll workers		
HAVA	Accessible entrance (left directional)	100	Tape to wall *or* hang from edge of registration table		
HAVA	Accessible entrance (right directional)	101			
HAVA	Restricted entrance	110			
	No cell phone	120		30% postconsumer waste recycled text stock	Digital print vendor
	Information	130			
	Vote by paper ballot	140			
	Vote by touchscreen	150			
	Turn in ballot here	160			

Table continues across 2.7

Fabrication time (approx.)	Cost (approx.)	Longevity	Environmental impact	Trade-offs
7–14 days	250 qty: $50 per sign 500 qty: $28 per sign 1,500 qty: $15 per sign	6–12 years if materials are stored in sealed poster tubes	Paper is 100% recyclable (at specific recycle facilities), waterproof, long lasting, durable; clean production and printing	Paper requires offset printing, extra drying time, and special inks; sheet size is not large enough for the "Vote here" banner
5–6 days	$42 per two-language sign (larger size) $22 per English only $98 per banner	6–12 years if materials are stored in sealed poster tubes	Eco-friendly printing methods; uses less ink; material is lightweight and flame-resistant	A second material will be required for table cards
2–3 days	$48 per two-language sign (larger size) $24 per English only	1–2 years	Paper comprised of minimum recycled stock; printing method is not eco-friendly	Material has short shelf life (will need to be reprinted more often, creating more waste)
2–3 days	$48 per two-language sign $24 per English only $68 for large banner	6–12 years	Material is not eco-friendly	Paper offers longevity at the expense of environmental responsibility
7–14 days	250 qty: $26 per sign 500 qty: $17 per sign 1,500 qty: $8 per sign	6–12 years if materials are stored flat in archival boxes	Paper is 100% recyclable (at specific recycle facilities), waterproof, long lasting, durable; clean production and printing; tape is easily removed	Paper requires offset printing, extra drying time, and special inks
7–14 days	250 qty: $11 per sign 500 qty: $6 per sign 1,500 qty: $3 per sign	3–5 years if materials are stored flat in archival boxes	100% recycled stock (no new trees cut); 100% recyclable	Fiber-based paper may be prone to tears and weakness at folds; tape can rip paper when removed for storage
2–3 days	$4 per folded table card	1–3 years	Paper stock has no postconsumer waste fibers	Typical mass-market vendor does not have recycled stock available
7–14 days	250 qty: $16 per sign 500 qty: $9 per sign 1,500 qty: $5 per sign	6–12 years if materials are stored flat in archival boxes	Paper is 100% recyclable (at specific recycle facilities), waterproof, long lasting, durable; clean production and printing; tape is easily removed	Paper requires offset printing, extra drying time, and special inks
Immediate	$165 per 5,000 sheets/ 10 reams of paper = $0.30 sheet	3–5 years if materials are stored flat in archival boxes	100% recycled stock (no new trees cut); 100% recyclable	Solution is dependent on election official's in-house resources (requires special paper), but control over production quantities is a plus
2–3 days	$0.50 per sheet	1–3 years	Paper comprised of minimum recycled stock; printing method is not eco-friendly	Material has short shelf life (will need to be reprinted more often, creating more waste)

Design: one language

The samples on pages 2.10–2.31 are for voter information materials. Production specifications and discussion notes are provided—including typeface, type size, leading, line weights, tint fills, and distances between elements.

Voter information materials are presented in the following categories:

A Identification

B Wayfinding (e.g., directions to accessible entrances)

C Information and Instruction

These categories are offered to help election officials understand what is available and to help them determine which items and formats best suit their needs.

Electronic files
The electronic files that were used to create these samples are listed in this section's Overview (pages 2.10–2.11) and with each sample.

The electronic files are available at www.eac.gov.

They are provided in two formats: Acrobat (.pdf) and InDesign (.indd).*

Each item has a unique identification number and file name. For example, the English-language information poster Acrobat file is named "130_E_Info.pdf."

How to work with the samples and electronic files
Many of the samples illustrated in this section can be reproduced and used without making any text changes to the digital document file. They can be printed by an office printer with color capabilities, or, for the larger format items, be reproduced by a vendor with digital printing capabilities.

— *If there are no changes to an item, download the Acrobat file.* An Acrobat file always ends in ".pdf". For example, to reproduce the Information poster (item "130_E_Info," page 2.44), download and print out the Acrobat file (130_E_Info.pdf) or supply that file to a vendor with digital printing capabilities.

Local vendors with digital printing capabilities often include printing firms and copy and duplicating service shops. "Digital printing capabilities" means they can accept a digital file and "output" it or print it on an appropriate display material (see pages 2.6–2.7). "Digital printing" often means ink jet printing. Even traditional "copy shops" often now have digital output capabilities.

— *If changes need to be made to an item, download the Indesign file.* InDesign files end with ".indd." Much of the text used in this section's samples may or may not be appropriate for any given jurisdiction and/or the voting equipment. Illustrations used in the InDesign files may also be modified—the file names end in ".eps."

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To edit files ending with ".indd" or files ending in ".eps," election officials will need access to Adobe InDesign page layout software and to software that can edit .eps files (e.g., Adobe Illustrator). Working with a designer who has access to—and expertise in—these software programs is recommended.

Alternatively, these items can be recreated in other page layout programs using the production specifications provided with each sample; the Acrobat .pdf files as a visual guide; and, if appropriate, the illustration files provided (those files ending in .eps). Using nonlayout programs, such as those commonly used to write text-only documents, is not appropriate or recommended.

Use of color

Many of the samples use the colors "blue" and "red"; in all cases, the CMYK ink percentages of these colors are:

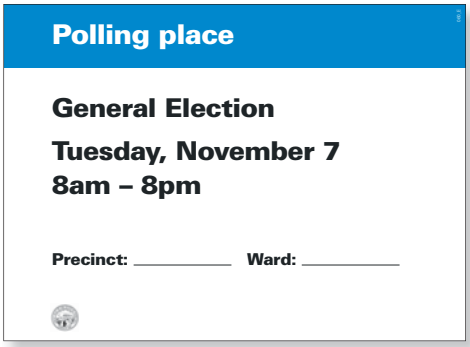
Blue: 89% cyan, 43% magenta, 0% yellow, and 0% black.
Red: 0% cyan, 94% magenta, 100% yellow, and 0% black.

Color has been applied to voter information materials to support usability needs—not for decorative purposes. Replacing blue or red with black does not affect any piece's functional value. Guidance in limiting color quantity (one to two colors) and application (mainly in headers, labels, and icons) is intended to maximize its effectiveness in the polling place environment.

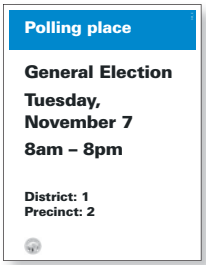
A Identification banner, posters, and name tags

180 Vote here banner

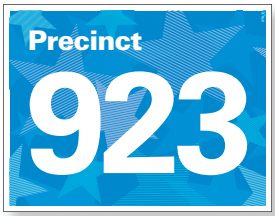
080 Vote here poster



060 Polling place ID



061 Polling place ID



070 Precinct ID

090 Poll worker ID badges

B Wayfinding posters

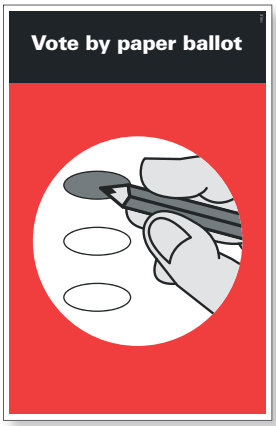
100 and 101 Access

110 No entry

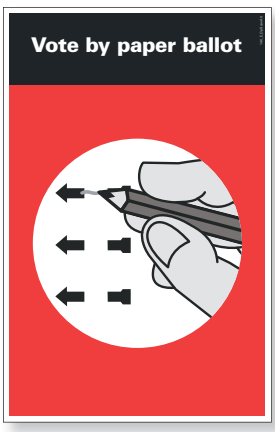
200 Arrow

130 Information

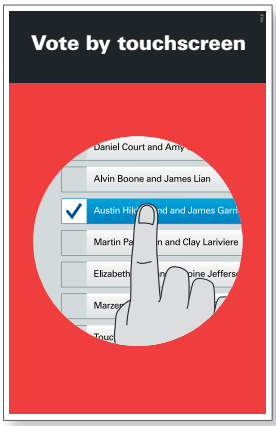
120 No cell phones



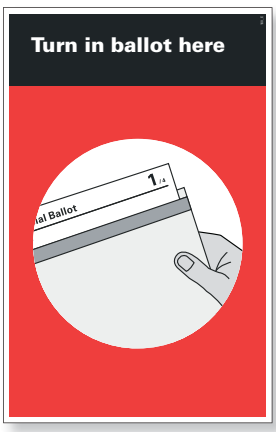
140 Vote by paper ballot



140 Vote by paper ballot

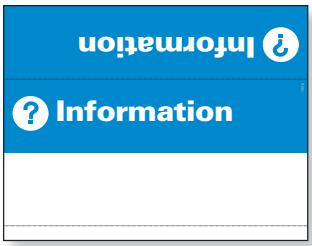


150 Vote by touchscreen

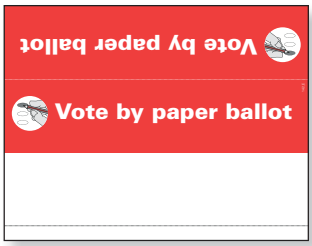


160 Return ballot

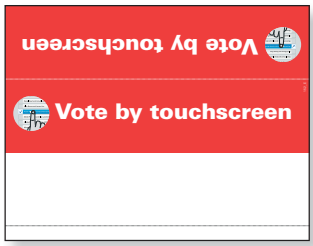
B Wayfinding, tabletop formats



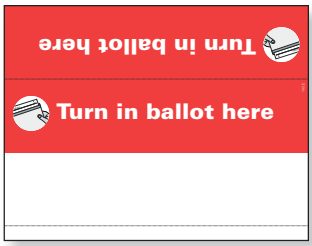
132 Information



142 Vote by paper ballot

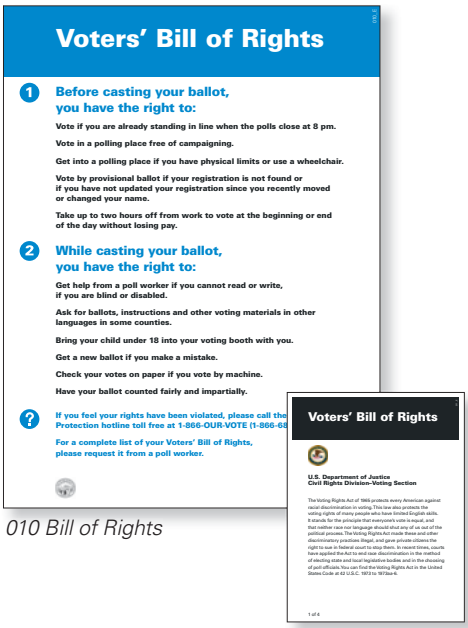


152 Vote by touchscreen



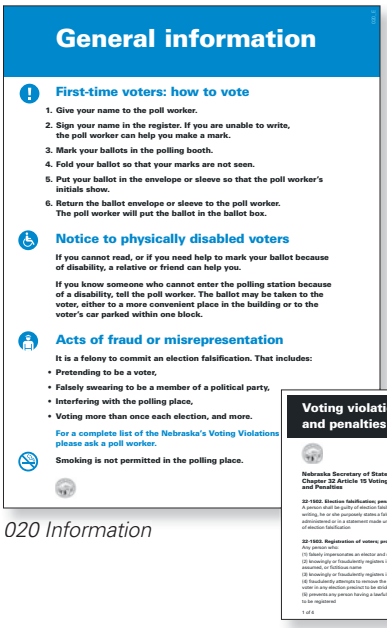
162 Turn in ballot

C Information and instruction, posters, binder pages, and tabletop formats

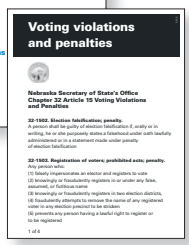


010 Bill of Rights

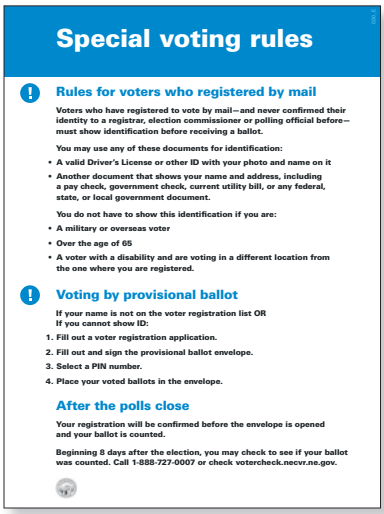
011 Bill of Rights binder



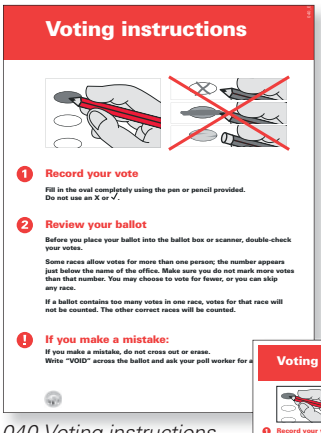
020 Information



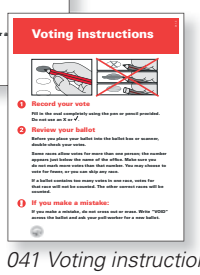
021 Information binder



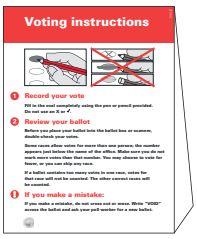
030 Special Rules



040 Voting instructions

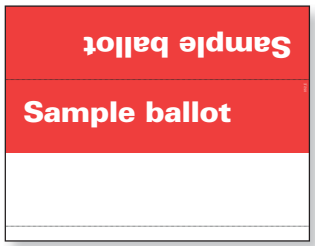


041 Voting instructions



042 Voting instructions

051 Sample ballot ID



052 Sample ballot ID

12.5% actual size

Exterior banner specifications
File: 180_E_BannerHoriz
Dimensions: 54" x 11"

1 **Title**
Type: Univers 75, size 447 pt., tracking -10, 100% white.

2 **Subtitle**
Type: Roman alphabets Univers 55, size 103 pt., tracking 0, 45% blue.

Other: Cap height max 1", 45% blue.

3 **Background**
Place file: starfield.eps

4 **Item ID number**
Type: Univers 55,
size 20 pt., tracking 0, 100% white.

Discussion
Banners are for exterior use and may be hung horizontally or vertically.

If printed on weatherproof material, banners should last 5–10 years.

Message and graphics connote a positive atmosphere. Consistent identification helps polling place appear organized and helps to lend credibility to voting experience.

Alter translations based on preferred alternate languages.

Clearly visible polling place identification is particularly important when districts have been recently revised.

42% actual size

Exterior door/window poster specifications
File: 080_E_VoteHere
Dimensions: 8.5" x 11"

1 **Title**
Type: Univers 75, size 185 pt., leading 165 pt., tracking -15, 100% white.

2 **Background**
Place file: starfield.eps. Margin: 0.25".

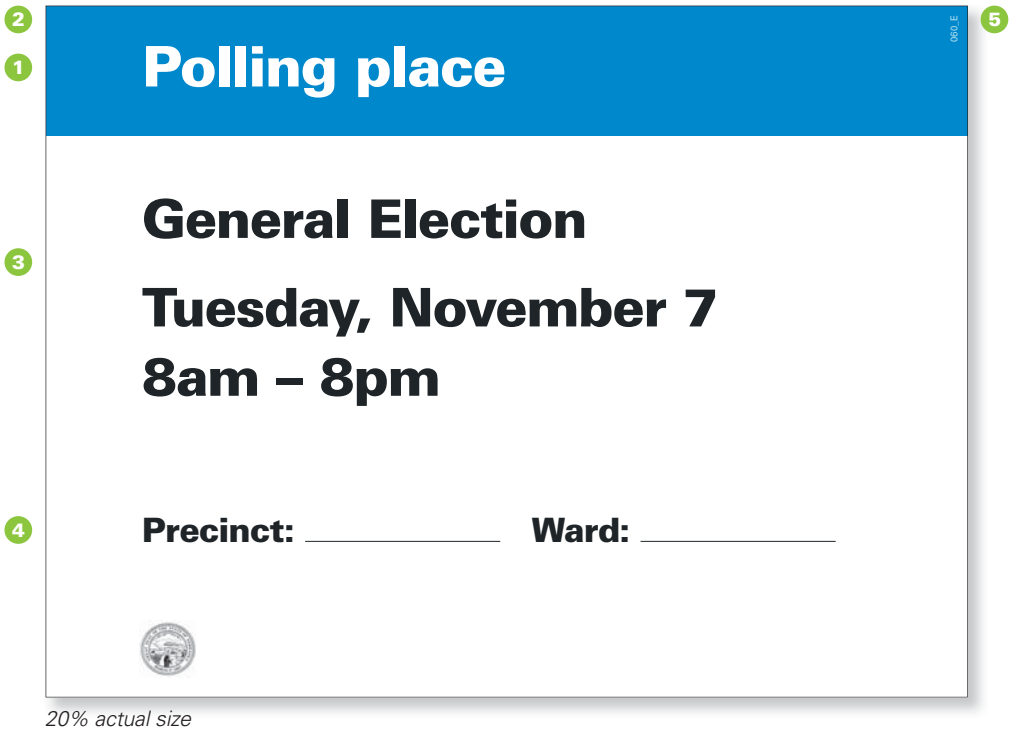
3 **Item ID number**
Type: Univers 55,
size 10 pt., tracking 0, 30% blue.

Discussion
Message and graphics connote a positive atmosphere. Consistent identification helps polling place appear organized and helps to lend credibility to voting experience.

Place signs on or near entryway to room where voting takes place and at eye level.

No editing of information necessary.

Smaller signs reinforce exterior banners. Strategic repetition of signs helps guide voters and provide assurance.



20% actual size

Polling place identification specifications
File: 060_E_PollingPlace
Dimensions: 18" x 24"

1 **Title**
Type: Univers 75, size 105 pt., tracking -15, 100% white.

2 **Title background**
100% blue fill, 3.375" from top edge.

3 **Information**
Type: Univers 75, size 100 pt., leading 130 pt., tracking -15, Space after paragraph: 0.5". 100% black.

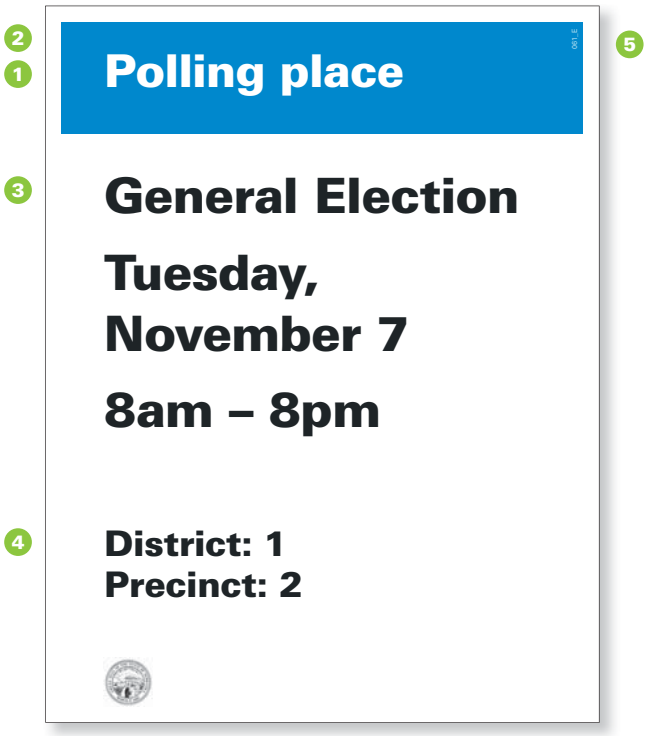
4 **Precinct/Ward**
Type: Univers 55, size 63 pt., tracking 0, 100% white.

5 **Item ID number**
Type: Univers 55, size 18 pt., tracking 0, 30% blue.

Discussion
Posting precinct, hours, and date information is required by HAVA. Template can be produced in quantity to reduce costs.

Handwritten information should be legible and of a similar size and weight of the printed text. Consider printing information via ink jet or laser printer on stickers that can then be applied to signs.

For exterior use and should be produced on weatherproof material.



25% actual size

Polling place identification—door format specifications
File: 061_E_PollingPlace_Door
Dimensions: 8.5" x 11"

1 **Title**
Type: Univers 75, size 50 pt., tracking -10, 100% white.

2 **Title background**
100% blue fill, 2" from top edge, 0.25" margin top and side edges.

3 **Information**
Type: Univers 75, size 54 pt., leading 67 pt., tracking -10, Space after paragraph: 0.25". 100% black.

4 **District/Precinct**
Type: Univers 75, size 39 pt., leading 46 pt., tracking -10, 100% black.

5 **Item ID number**
Type: Univers 75, size 8 pt., tracking 0, 30% blue.

Discussion
Posting precinct, hours, and date information is required by HAVA.

For interior use; place at eye level (approximately 5 feet above ground).

25% actual size

Precinct identification specifications
File: 070_E_Precinct
Actual dimensions: 11" x 8.5"

1 **Title**
Type: Univers 75,
size 80 pt., tracking -15, 100% white.

2 **Precinct number**
Type: Univers 65,
size 425 pt., tracking -30, 100% white.

3 **Background**
Place file: starfield.eps

4 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0,
100% white.

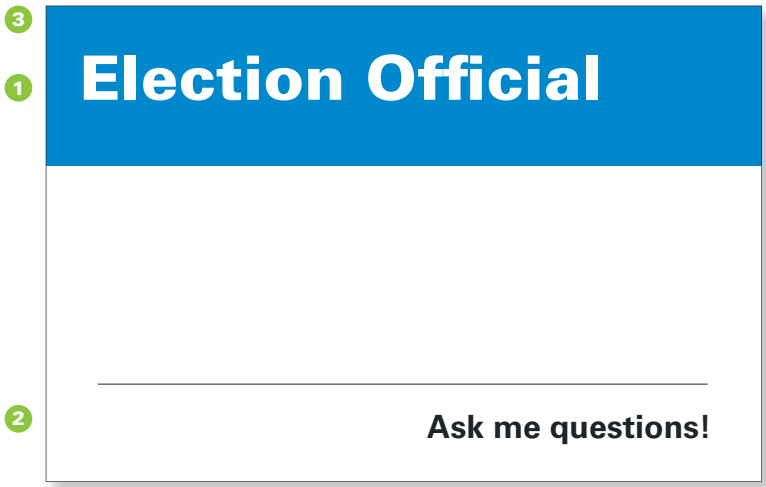
Discussion
Posting this information is a HAVA requirement.

Precinct can be replaced with applicable division name.

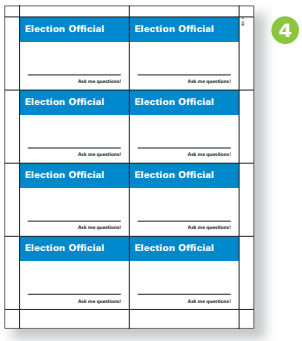
This poster can also guide voters when more than one precinct is located in the same polling place.

Place near precinct-specific poll workers on freestanding sign holder. For example, at the beginning of a voting line, near the voting booths or appropriate ballot box.

For exterior/interior use; place at eye level.



detail, 100% of actual size



15% actual size

Poll worker identification specifications
File: 090_E_Pollworker
Actual dimensions: 8 per 11" x 8.5"

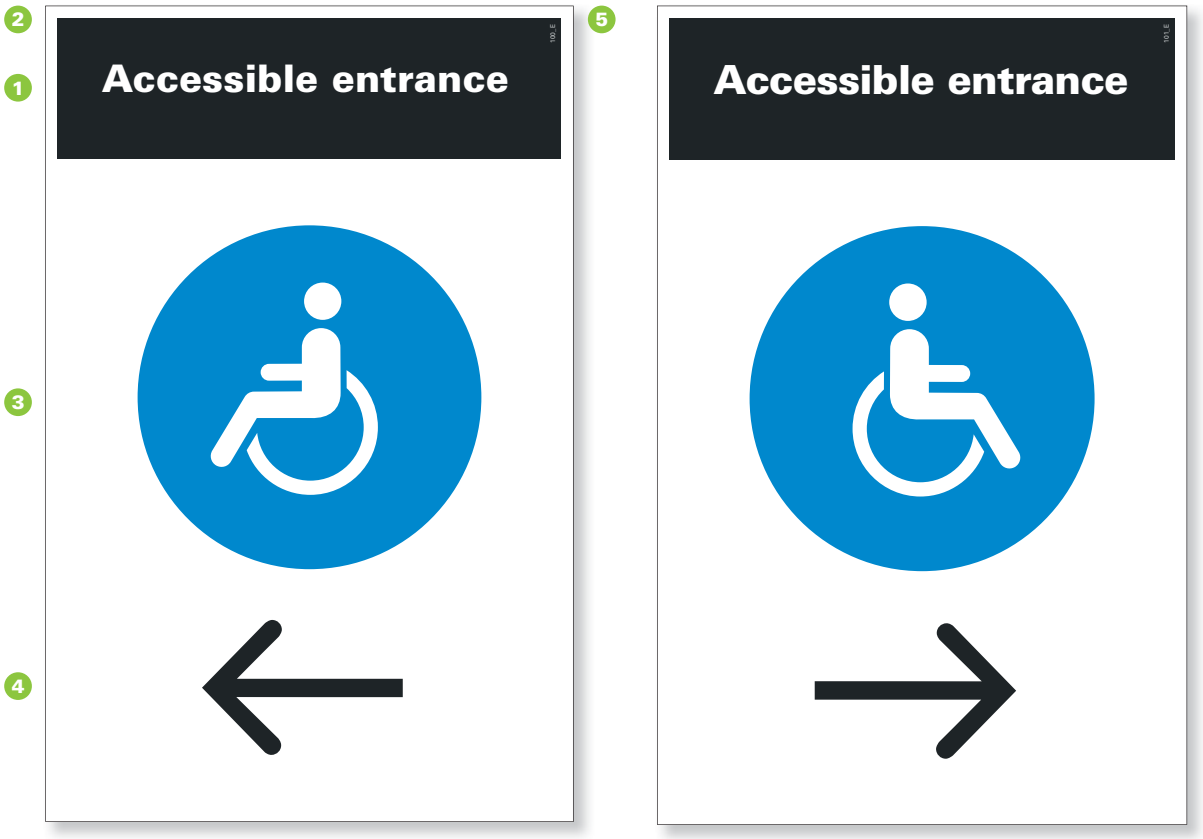
1 **Title**
Type: Univers 75,
size 23 pt., tracking 0, 100% white.

2 **Ask me questions!**
Type: Univers 65,
size 12 pt., tracking 0, 100% black.

3 **Title background**
Height: 0.84", 100% blue

4 **Item ID number**
Type: Univers 75, size 8 pt., tracking 0,
100% black.

Discussion
These may be printed on an office printer using commonly available adhesive labels or name badges.



25% actual size

Accessible entrance specifications
Files:
100_E_AccessL
101_E_AccessR
Dimensions: 11" x 17"

1 **Title**
Type: Univers 75,
size 60 pt., tracking -10, 100% white.

2 **Title background**
100% black fill, 3" from top edge,
0.25" margin top and side edges.

3 **Icons**
7.25" diameter, 100% blue

4 **Arrow**
2.8" in height, 100% black.

5 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% black.

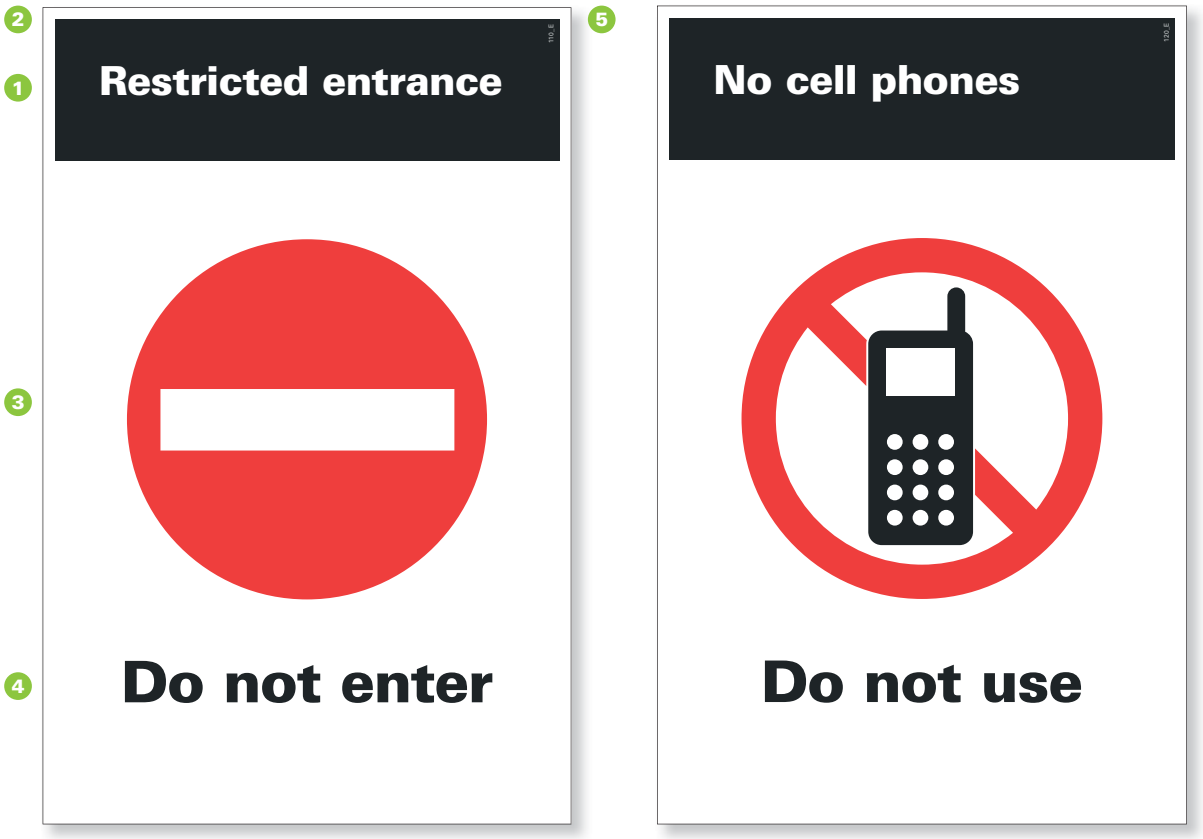
Discussion
Posting this information is a HAVA requirement.

Primarily used for older buildings; newer buildings should be ADA compliant.

Place directional signs at main entrance.

To identify accessible entrance remove arrow or use Vote here! poster (File: 080_E_VoteHere).

Place at eye level (approximately 5 feet above ground).



25% actual size

Do not enter, No cell phones specifications
Files:
110_E_NoEnter
120_E_NoCell
Dimensions: 11" x 17"

1 **Title**
Type: Univers 75,
size 60 pt., tracking -10, 100% white.

2 **Title background**
100% black fill, 3" from top edge,
0.25" margin top and side edges.

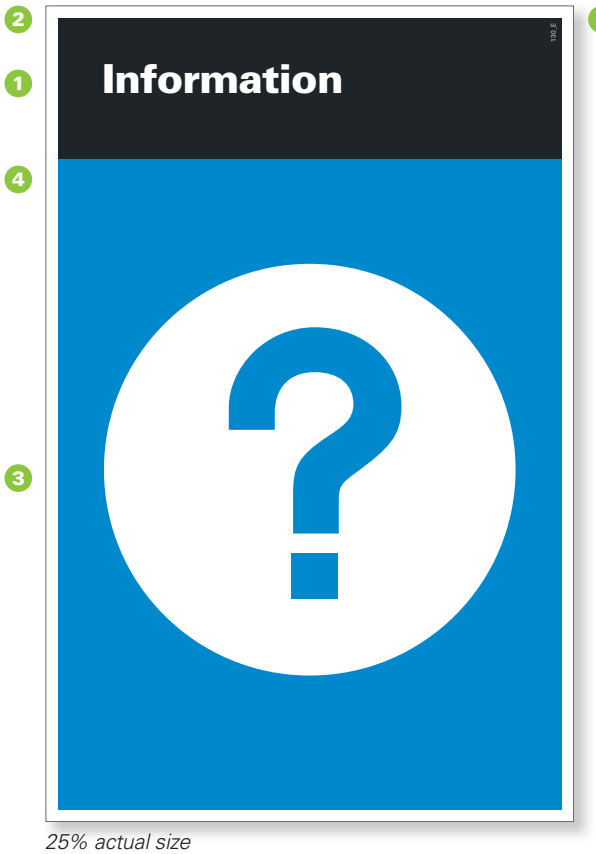
3 **Icons**
7.5" diameter, 100% red

4 **Instructions**
Type: Univers 75,
size 86 pt., tracking -10, 100% black.

5 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% black.

Discussion
The restricted entrance information is required (if applicable).

Place at eye level (approximately 5 feet above ground).



25% actual size

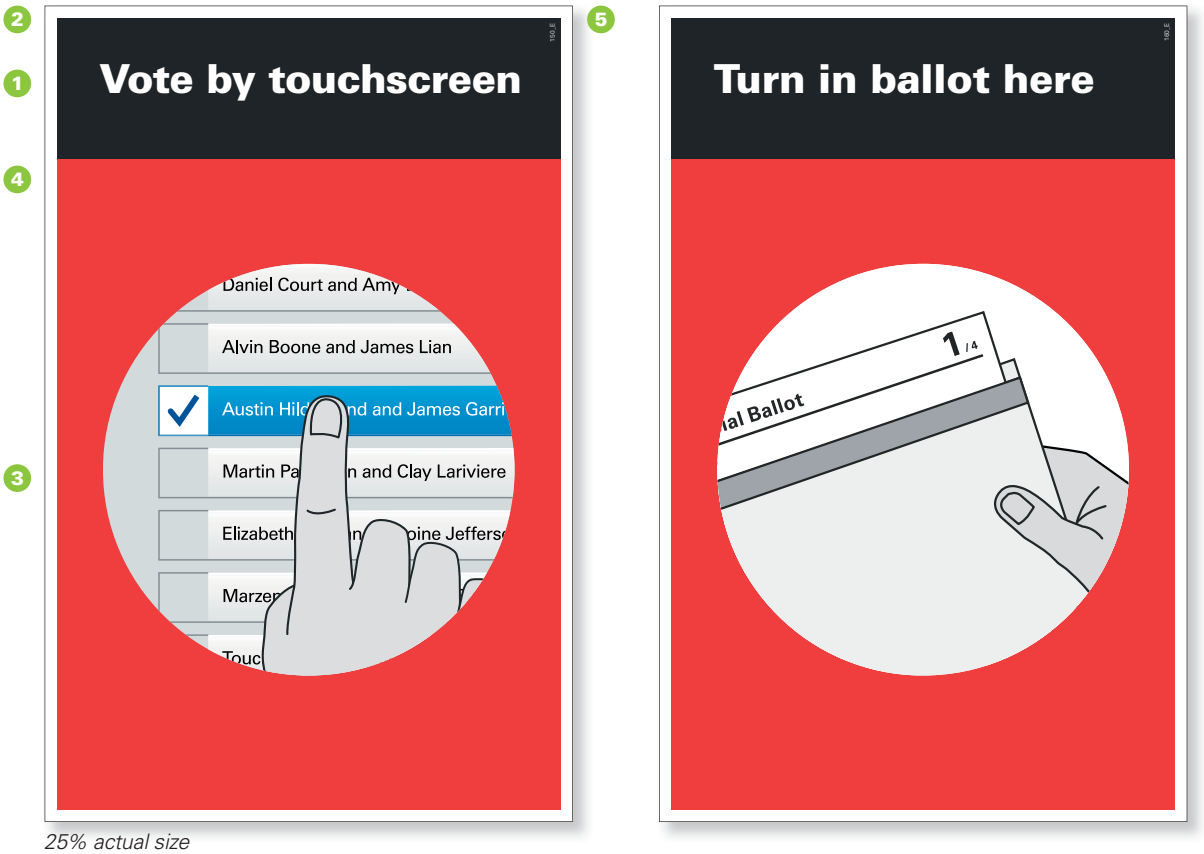
Information, Paper ballot specifications
Files:
130_E_Info
140_E_OpScan
Dimensions: 11" x 17"

1. **Title**
   Type: Univers 75,
   size 60 pt., tracking -10, 100% white.
2. **Title background**
   100% black fill, 3" from top edge,
   0.25" margin top and side edges.
3. **Icons**
   8.5" diameter
   Place file: OpScan_Oval.eps
4. **Background**
   100% blue fill, 0.25" margin bottom
   and side edges.
5. **Item ID number**
   Type: Univers 55, size 10 pt., tracking 0, 30% black.

Discussion
Place as close as possible to applicable station or desk. Hanging from ceiling or via freestanding sign holder may be necessary to provide visibility and guide voters through the process. Taping signs to table tops or fronts often offers insufficient visibility.

For interior use; place at eye level (approximately 5 feet above ground) or higher.

For optical scan ballots that use an arrow to indicate a selection, use the file titled 140_E_OpScanAlt.



25% actual size

Wayfinding poster specifications
Files:
150_E_Touchscreen
160_E_ReturnBallot
Dimensions: 11" x 17"

1 **Title**
Type: Univers 75,
size 60 pt., tracking -10, 100% white.

2 **Title background**
100% black fill, 3" from top edge,
0.25" margin top and side edges.

3 **Icons**
8.5" diameter
Place files:
Touchscreen.eps
Return_Ballot.eps

4 **Background**
100% blue fill, 0.25" margin bottom
and side edges.

5 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% black.

Discussion
Place as close as possible to applicable station or desk. Hanging from ceiling or via freestanding sign holder may be necessary to provide visibility and guide voters through the process. Hanging signs from tabletops often offers insufficient visibility.

For interior use; place at eye level (approximately 5 feet above ground) or higher.

27% actual size

Wayfinding—tabletop specifications
Files:
132_E_Info_Tabletop
142_E_OpScan_Tabletop
152_E_Touchscreen_Tabletop
162_E_ReturnBallot_Tabletop
Dimensions: 10" x 8"

1. **Title: Information**
Type: Univers 75, size 70 pt., tracking -10, 100% white.

2. **Title: others**
Type: Univers 75, size 53 pt., tracking 0, 100% white.

3. **Title background**
100% blue or 100% red, 2.5" from top edge.

4. **Icons**
1.1863" diameter, 0.75" from side.
Place files:
OpScan_Oval.eps
Touchscreen.eps
Return_Ballot.eps

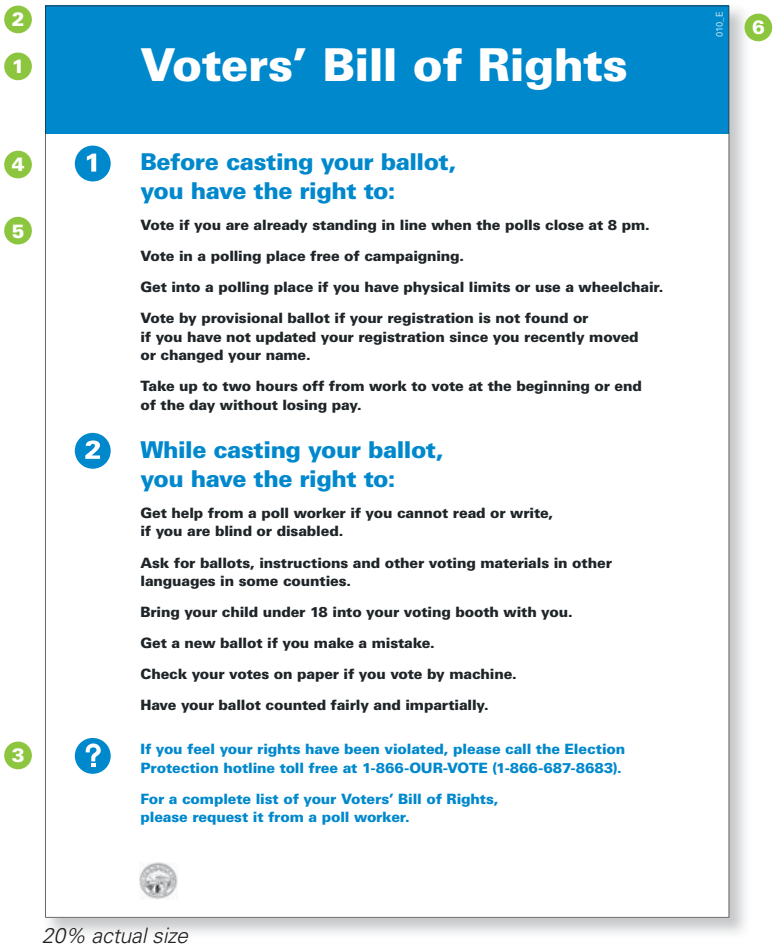
5. **Fold marks**
2.75" and 7.75" from top.

6. **Item ID number**
Type: Univers 55, size 8 pt., tracking 0, 30% blue or red.

Discussion
Assembly: trim to 8" x 10", removing white margin. Use fold marks to form triangular shape and attach tab with tape.

assembled

For optical scan ballots that use an arrow to indicate a selection, use the file titled 142_E_OpScan_TabletopAlt.



20% actual size

Voters' Bill of Rights specifications
File: 010_E_Rights
Dimensions: 18" x 24"

1 **Title**
Type: Univers 75,
size 86 pt., tracking 0, 100% white.

2 **Title background**
100% blue fill, 3.375" from top edge.

3 **Icons**
0.945" diameter, 0.75" from left edge.

4 **Subhead**
Type: Univers 75,
size 44 pt., leading 55 pt.., tracking -15, 100% blue.

5 **Text**
Type: Univers 75, 2.75" from left edge,
size 27 pt., leading 35 pt., tracking -10. Space after paragraph: 0.3333". 100% black and blue.

6 **Item ID number**
Type: Univers 55, size 18 pt., tracking 0, 30% blue.

Discussion
Posting this information is a HAVA requirement.

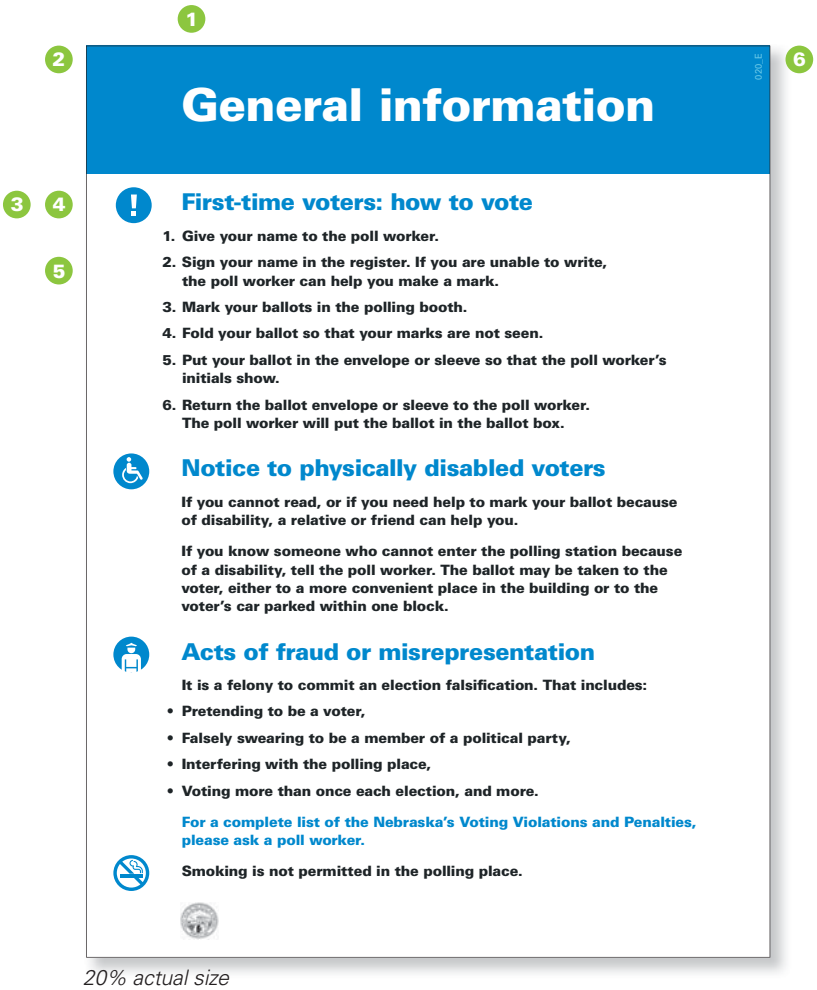
Place in visible locations—near waiting areas or where long lines form.

Voters should read this material before voting.

Organize information into three to four categories that can be highlighted, as shown here, to make sign easy to scan from a distance.

For interior use, mount on wall or place on stand.

Content needs to be modified for each State. The Voters' Bill of Rights content in this instance pertains specifically to Nebraska law. Election officials will have to download the editable version of this template (.indd) to edit the text for consistency with the requirements of their State.



20% actual size

Voters' Bill of Rights specifications
File: 020_E_Info
Dimensions: 18" x 24"

1 **Title**
Type: Univers 75,
size 86 pt., tracking 0, 100% white.

2 **Title background**
100% blue fill, 3.375" from top edge.

3 **Icons**
0.945" diameter, 0.75" from left edge.

4 **Subhead**
Type: Univers 75,
size 44 pt., leading 55 pt., tracking -15, 100% blue.

5 **Text**
Type: Univers 75, 2.75" from left edge,
size 27 pt., leading 35 pt., tracking -10. Space after paragraph: 0.3333". 100% black and blue.

6 **Item ID number**
Type: Univers 55, size 18 pt., tracking 0, 30% blue.

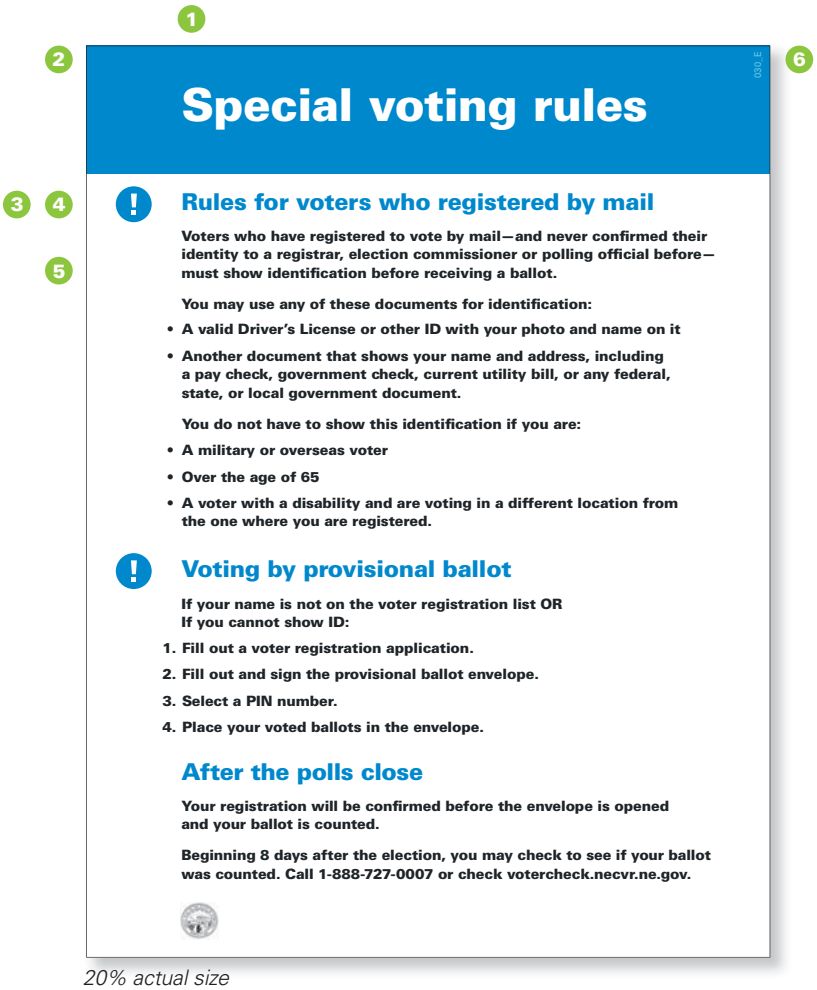
Discussion
Posting this information is a HAVA requirement. Content needs to be modified for each State.

Place in visible locations—near waiting areas or where long lines form.

Voters should read this material before voting.

Organize information into three to four categories that can be highlighted, as shown here, to make sign easy to scan from a distance.

For interior use; mount on wall or place on stand.



20% actual size

Voters' Bill of Rights specifications

File: 030_E_SpecialRules
Dimensions: 18" x 24"

1 Title
Type: Univers 75,
size 86 pt., tracking 0, 100% white.

2 Title background
100% blue fill, 3.375" from top edge.

3 Icons
0.945" diameter, 0.75" from left edge.

4 Subhead
Type: Univers 75,
size 44 pt., leading 55 pt., tracking -15, 100% blue.

5 Text
Type: Univers 75, 2.75" from left edge,
size 27 pt., leading 35 pt., tracking -10. Space after paragraph: 0.3333". 100% black and blue.

6 Item ID number
Type: Univers 55, size 18 pt., tracking 0, 30% blue.

Discussion

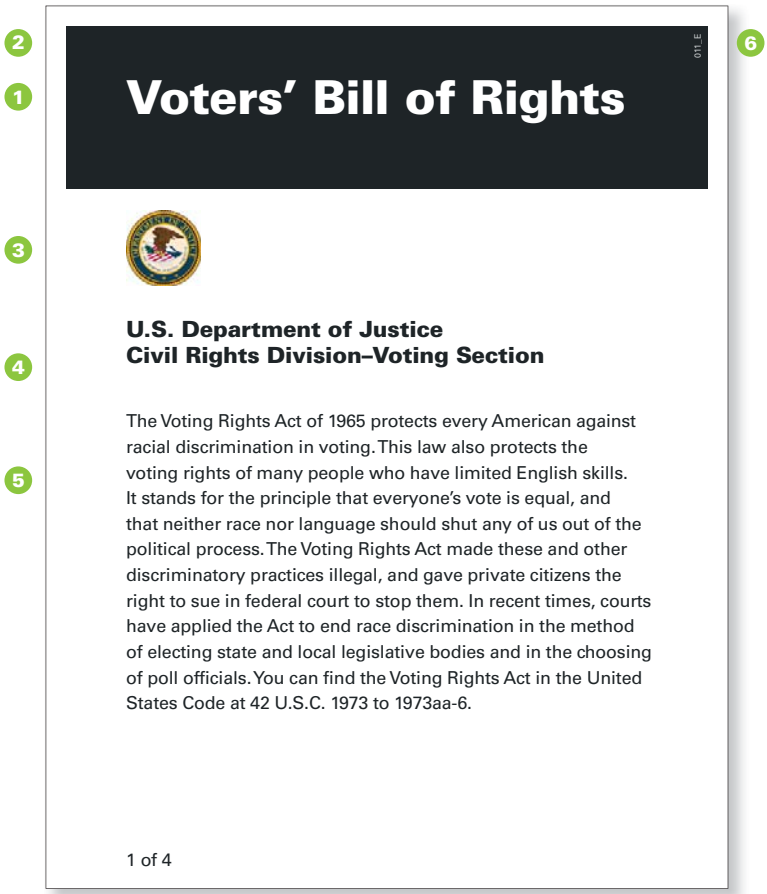
Posting this information is a HAVA requirement. Content needs to be modified for each State.

Place in visible locations—near waiting areas or where long lines form.

Voters should read this material before voting.

Organize information into three to four categories that can be highlighted, as shown here, to make sign easy to scan from a distance.

For interior use; mount on wall or place on stand.



42% actual size

Voters' Bill of Rights—binder format specifications
File: 011_E_Rights_Binder
Dimensions: 8.5" x 11"

1 **Title**
Type: Univers 75,
size 42 pt., tracking -10, 100% white.

2 **Title background**
100% black fill, 2.25" from top edge,
0.25" margin all edges.

3 **State seal**
1" diameter, 1" from left edge.

4 **Subhead**
Type: Univers 75,
size 20 pt., leading 23 pt., tracking -10, 100% black.

5 **Text**
Type: Univers 55,
size 16 pt., leading 23 pt., tracking -10, 100% black.

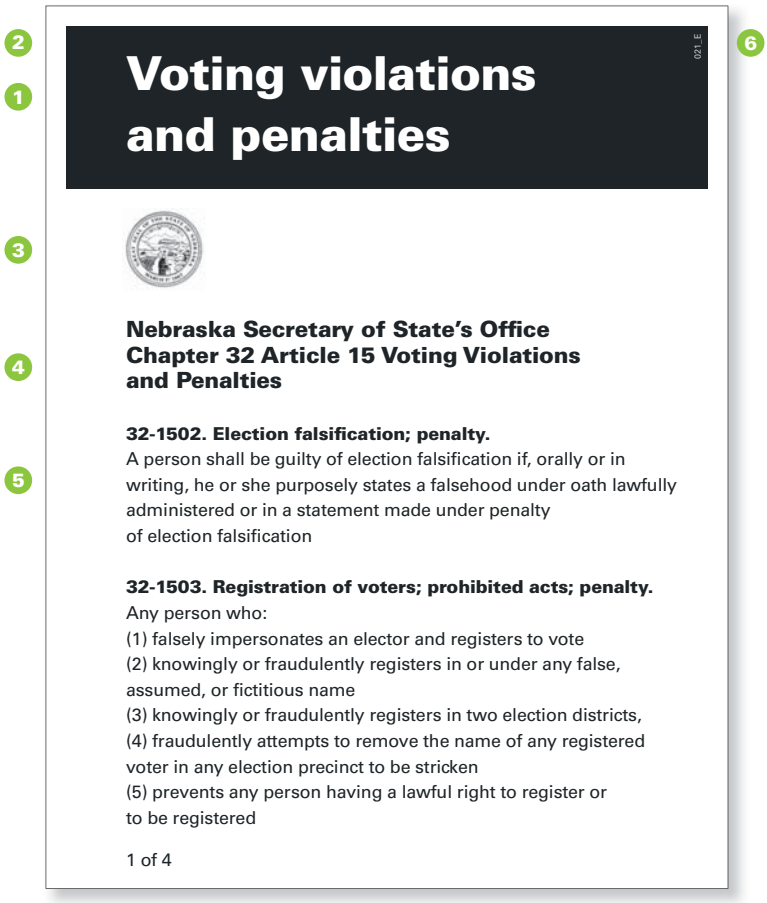
6 **Item ID number**
Type: Univers 55,
size 8 pt., tracking 0, 30% black.

Discussion
Assembly: three-hole punch and put in standard three-ring binder.

This format is a full-text version of the poster format (page 2.23).

Content needs to be modified for each State. The Voters' Bill of Rights content in this instance pertains specifically to Nebraska law. Election officials will have to download the editable version of this template (.indd) to edit the text for consistency with the requirements of their State.

Binders are suggested to display the full text of legally required State information that is not easily contained or read in a wall display format by voters (such as voters' rights information). Binders can also be used to display other redundant information already posted in the polling environment, such as voting instructions.



42% actual size

General information—binder format specifications
File: 021_E_Info_Binder
Dimensions: 8.5" x 11"

1 **Title**
Type: Univers 75, size 42 pt., leading 54 pt., tracking -10, 100% white.

2 **Title background**
100% black fill, 2.25" from top edge, 0.25" margin all edges.

3 **State seal**
1" diameter, 1" from left edge.

4 **Subhead**
Type: Univers 75, size 20 pt., leading 23 pt., tracking -10, 100% black.

5 **Text**
Type: Univers 75 and 55, size 16 pt., leading 23 pt., tracking -10, 100% black.

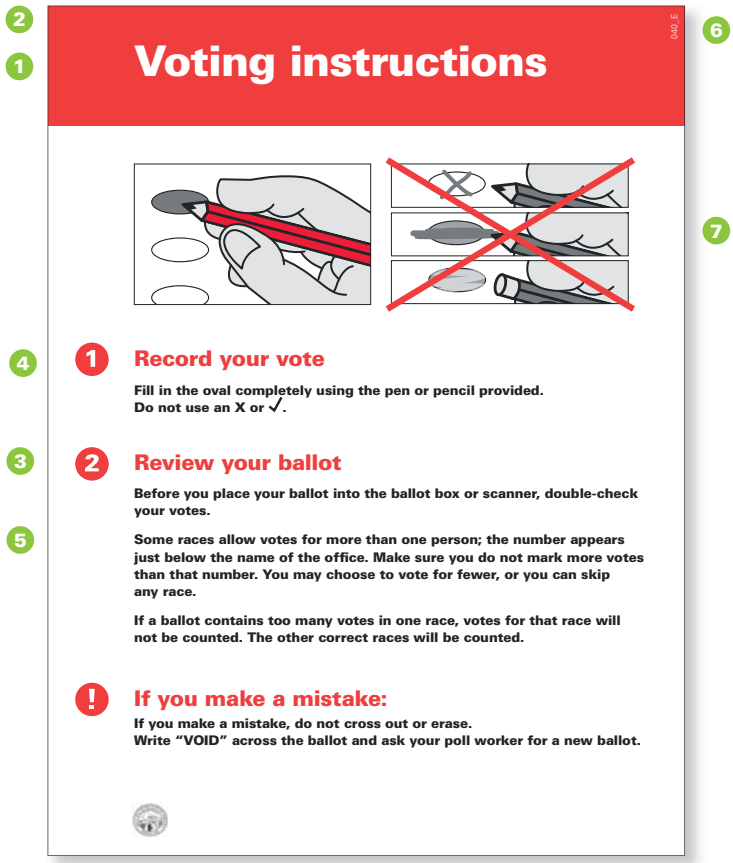
6 **Item ID number**
Type: Univers 55, size 8 pt., tracking 0, 30% black

Discussion
Assembly: three-hole punch and put in standard three-ring binder.

This format is a full-text version of the poster format (page 2.24).

Content needs to be modified for each State. The content in this instance pertains specifically to Nebraska law. Election officials will have to download the editable version of this template (.indd) to edit the text for consistency with the requirements of their State.

Binders are suggested to display the full text of legally required State information that is not easily contained or read in a wall display format by voters (such as voters' rights information). Binders can also be used to display other redundant information already posted in the polling environment, such as voting instructions.



25% actual size

Voting Instructions poster specifications

File: 040_E_Instructions
Dimensions: 18" x 24"

1. **Title**
   Type: 86 pt. Univers 75, tracking 0, 100% white.
2. **Title background**
   100% red fill, 3.375" from top edge.
3. **Icons**
   0.945" diameter, 0.75" from left edge.
4. **Subhead**
   Type: Univers 75, size 44 pt., leading 55 pt., tracking -10, 100% red.
5. **Text**
   2.75" from left edge
   Type: 27 pt. Univers 75, leading 35 pt., tracking -10.
   Space after paragraph: 0.3333". 100% black.
6. **Item ID number**
   Type: 18 pt Univers 55, tracking 0, 30% red.
7. **Illustrations**
   Place file: OpScan_Oval.eps

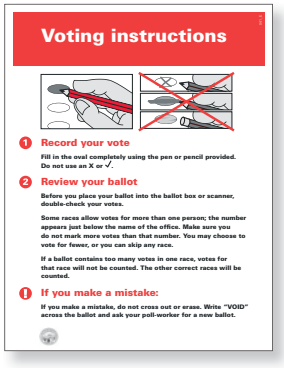
Discussion

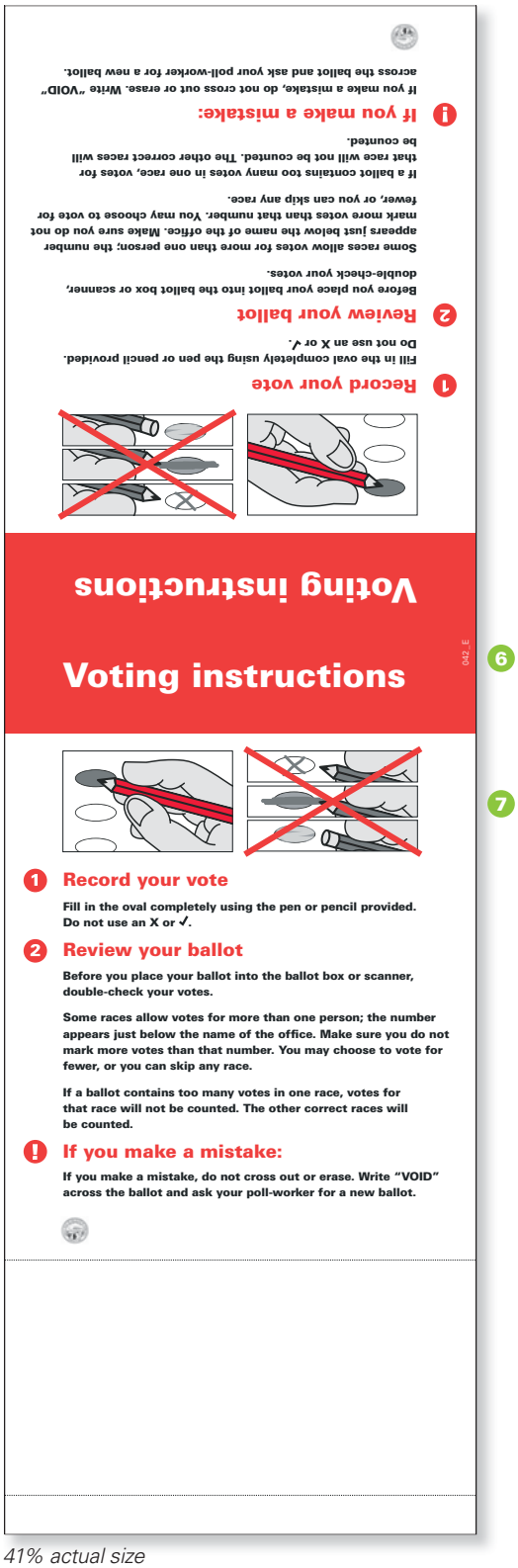
Posting this information is a HAVA requirement. Content needs to be modified for each State.

For interior use; mount on wall or prop on stand and post near waiting area or where long lines may form.

Content needs to be modified for each State and should be based on ballot type being used.

This poster is also available in an 8.5" x 11" format, see file: 041_E_Instructions_Booth.





41% actual size

Voting Instructions—tabletop specifications
File: 042_E_Instructions
Dimensions: 6″ x 19.5″

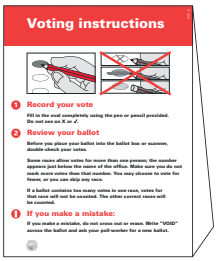
1. **Title**
   Type: 31 pt. Univers 75, tracking 0, 100% white.
2. **Title background**
   100% red fill, 1.28″ from top edge.
3. **Icons**
   0.3″ diameter, 0.25″ from left edge.
4. **Subhead**
   0.75″ from left edge
   Type: Univers 75, size 17 pt., tracking -15, 100% red.
5. **Text**
   0.75″ from left edge
   Type: 11 pt. Univers 75, leading 15 pt., tracking -10, Space after paragraph: 0.125″. 100% black.
6. **Item ID number**
   Type: 8 pt Univers 55, tracking 0, 30% red.
7. **Illustrations**
   Place file: OpScan_Oval.eps

Discussion
Posting this information is a HAVA requirement. Content needs to be modified for each State.

For interior tabletop use.

Content needs to be modified for each State and should be based on ballot type being used.

Assembly: trim to 6″ x 15.5″. Use fold marks to form triangular shape and attach tab with tape.



assembled

42% actual size

Sample ballot poster specifications
File: 051_E_Sample_Door
Dimensions: 8.5" x 11"

1 **Title**
Type: Univers 75, size 150 pt., tracking -10, leading 160 pt., 100% white. 1.4" from left edge and 1.875" from top edge.

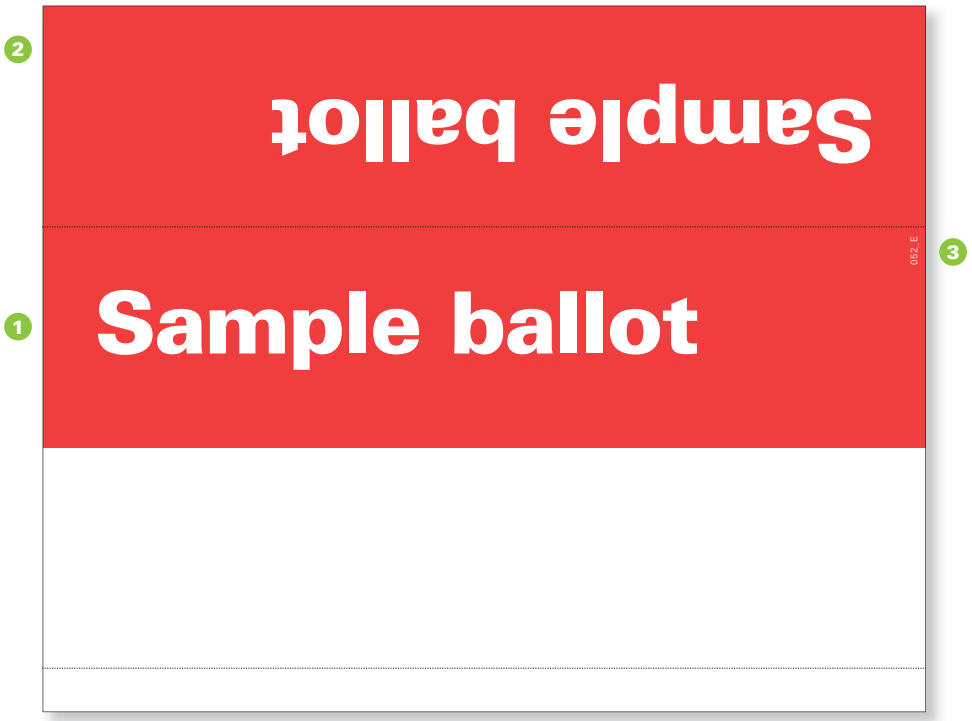
2 **Background**
100% red fill, 0.25" from edges.

3 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% red.

Discussion
Posting this information is a HAVA requirement.

Use poster to draw attention to actual sample ballots.

No editing of information necessary.



46% actual size

Sample ballot—tabletop specifications
File: 052_E_Sample_Tabletop
Dimensions: 8.5" x 11"

1 **Title**
Type: Univers 75, size 70 pt., tracking -10, 100% white.

2 **Background**
100% red fill, 5" high.

3 **Item ID number**
Type: Univers 55, size 8 pt., tracking 0, 30% red.

Discussion
Posting this information is a HAVA requirement.

Use tabletop sign to draw attention to actual sample ballots.

No editing of information necessary.

Assembly: trim to 8" x 10", removing white margin. Use fold marks to form triangular shape and attach tab with tape.

assembled

Design: two languages

The samples on pages 2.34–2.55 are for voter information materials. Production specifications and discussion notes are provided—including typeface, type size, leading, line weights, tint fills, and distances between elements.

Voter information materials are presented in the following categories:

A Identification

B Wayfinding (e.g., directions to accessible entrances)

C Information and Instruction

These categories are offered to help election officials understand what is available and to help them determine which items and formats best suit their needs.

Electronic files
The electronic files that were used to create these samples are listed in this section's Overview (pages 2.34–2.35) and with each sample.

The electronic files are available at www.eac.gov.

They are provided in two formats: Acrobat (.pdf) and InDesign (.indd).*

Each item has a unique identification number and file name. For example, the English/Spanish-language information poster Acrobat file is named "130_ES_Info.pdf."

How to work with the samples and electronic files
Many of the samples illustrated in this section can be reproduced and used without making any text changes to the digital document file. They can be printed by an office printer with color capabilities, or, for the larger format items, be reproduced by a vendor with digital printing capabilities.

— *If there are no changes to an item, download the Acrobat file.* An Acrobat file always ends in ".pdf." For example, if you want to reproduce the Information poster (item "130_ES_Info," page 2.44), download and print out the Acrobat file (130_ES_Info.pdf) or supply that file to a vendor with digital printing capabilities.

Local vendors with digital printing capabilities often include printing firms and copy and duplicating service shops. "Digital printing capabilities" means they can accept a digital file and "output" it or print it on an appropriate display material (see pages 2.6–2.7). "Digital printing" often means ink jet printing. Even traditional "copy shops" often now have digital output capabilities.

— *If changes need be made to an item, download the Indesign file.* InDesign files end with ".indd." Much of the text used in this section's samples may or may not be appropriate for your jurisdiction and/or the voting equipment. To edit text or illustrations and prepare files for reproduction, there are additional steps that must occur before the materials are ready for reproduction. Illustrations used in the InDesign files are also available. These files end with ".eps."

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.

To edit files ending with ".indd" or files ending in ".eps," election officials will need access to Adobe InDesign page layout software and to software that can edit .eps files (e.g., Adobe Illustrator). Working with a designer who has access to—and expertise in—these software programs is recommended.

Alternatively, these items can be recreated in other page layout programs using the production specifications provided with each sample; the Acrobat .pdf files as a visual guide; and, if appropriate, the illustration files provided (those files ending in .eps). Using nonlayout programs, such as those commonly used to write text-only documents, is not appropriate or recommended.

Use of color

Many of the samples use the colors "blue" and "red"; in all cases, the CMYK ink percentages of these colors are:

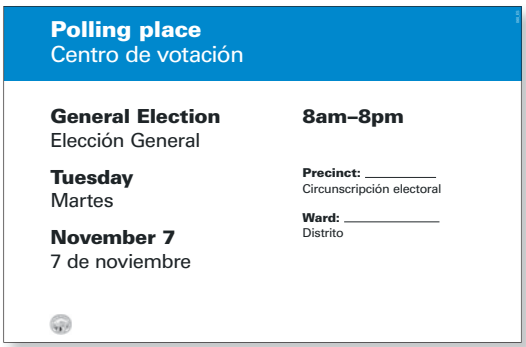
Blue: 89% cyan, 43% magenta, 0% yellow, and 0% black.
Red: 0% cyan, 94% magenta, 100% yellow, and 0% black.

Color has been applied to voter information materials to support usability needs—not for decorative purposes. Replacing blue or red with black does not affect any piece's functional value. Guidance in limiting color quantity (one to two colors) and application (mainly in headers, labels, and icons) is intended to maximize its effectiveness in the polling place environment.

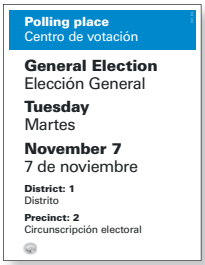
A Identification banners, posters, and name tags

180 Vote here banner

080 Vote here poster



060 Polling place ID



061 Polling place ID

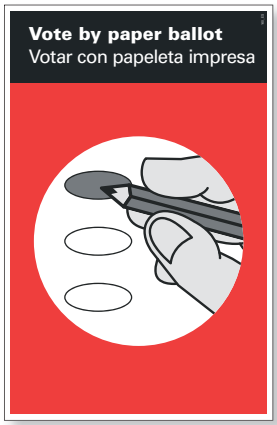
070 Precinct ID

090 Poll worker name tags

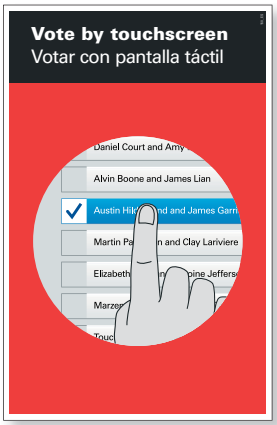
B Wayfinding posters

100 and 101 Access

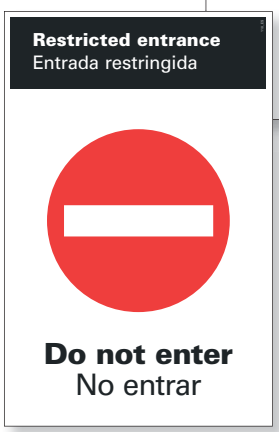
130 Information



140 Vote by paper ballot



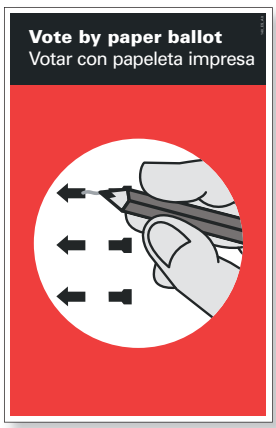
150 Vote by touchscreen



110 No entry

200 Arrow

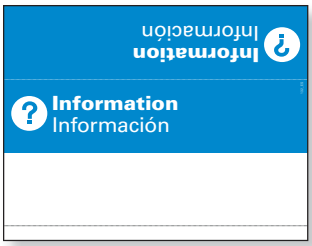
120 No cell phones



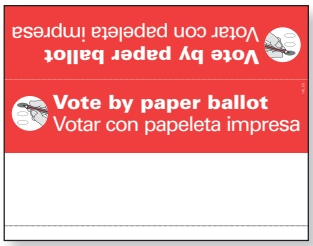
140 Vote by paper ballot

160 Return ballot

B Wayfinding, tabletop formats

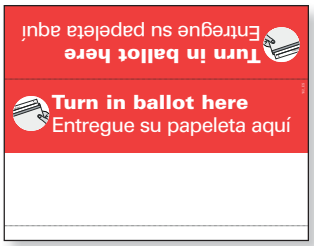


132 Information



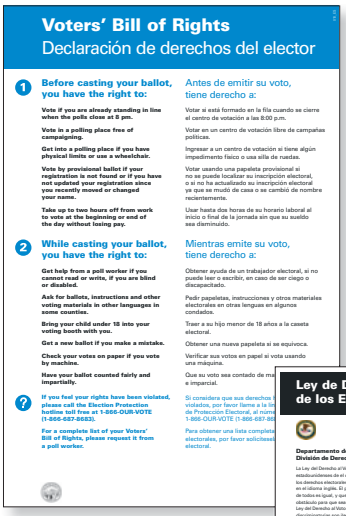
142 Vote by paper ballot

152 Vote by touchscreen



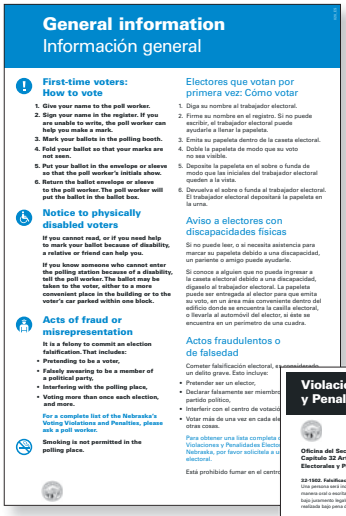
162 Turn in ballot

C Information and instruction, posters, binders, and tabletop formats

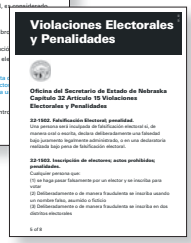


010 Bill of Rights

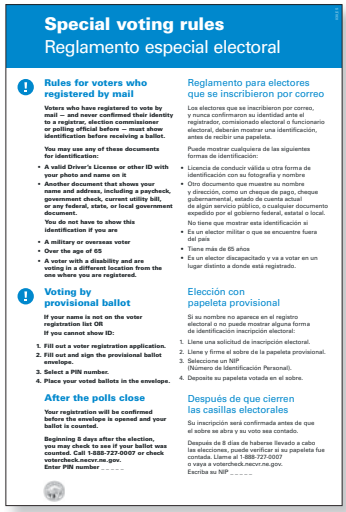
011 Bill of Rights binder



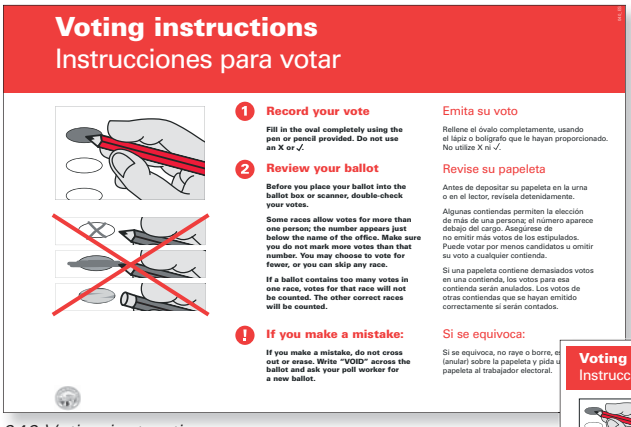
020 Information



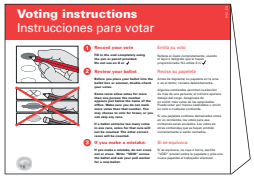
021 Information binder



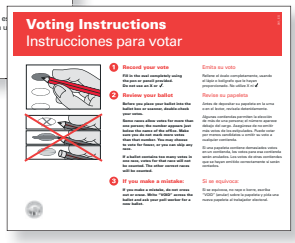
030 Special Rules



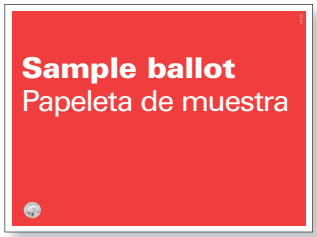
040 Voting instructions



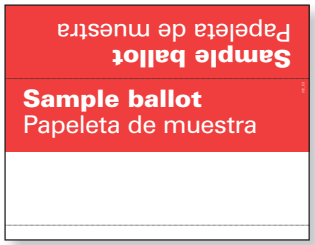
042 Voting instructions



041 Voting instructions



051 Sample ballot ID



052 Sample ballot ID

12.5% actual size

Exterior banner specifications
File: 180_ES_BannerHoriz
Dimensions: 54" x 11"

1 **Titles**
Type: 315 pt. Univers 93, tracking 0, and 320 pt. Univers 63, tracking 5, 100% white.

2 **Background**
Pattern is part of InDesign file, no illustration used.

3 **Item ID number**
Type: 20 pt. Univers 55, tracking 0, 100% white.

Discussion
Banners are for exterior use and may be hung horizontally or vertically.

If printed on weatherproof material, banners should last 5–10 years.

Message and graphics connote positive atmosphere. Consistent identification helps polling place appear organized—helps to lend credibility to voting experience.

Alter translations based on preferred alternate languages.

Clearly visible polling place identification is particularly important when districts have been recently revised.

42% actual size

Exterior door/window poster specifications
File: 080_ES_VoteHere
Dimensions: 8.5" x 11"

1 **Titles**
Type: 125 pt. Univers 75 and 55,
tracking -10, leading 116 pt., 100% white.

2 **Background**
Place file: starfield.eps

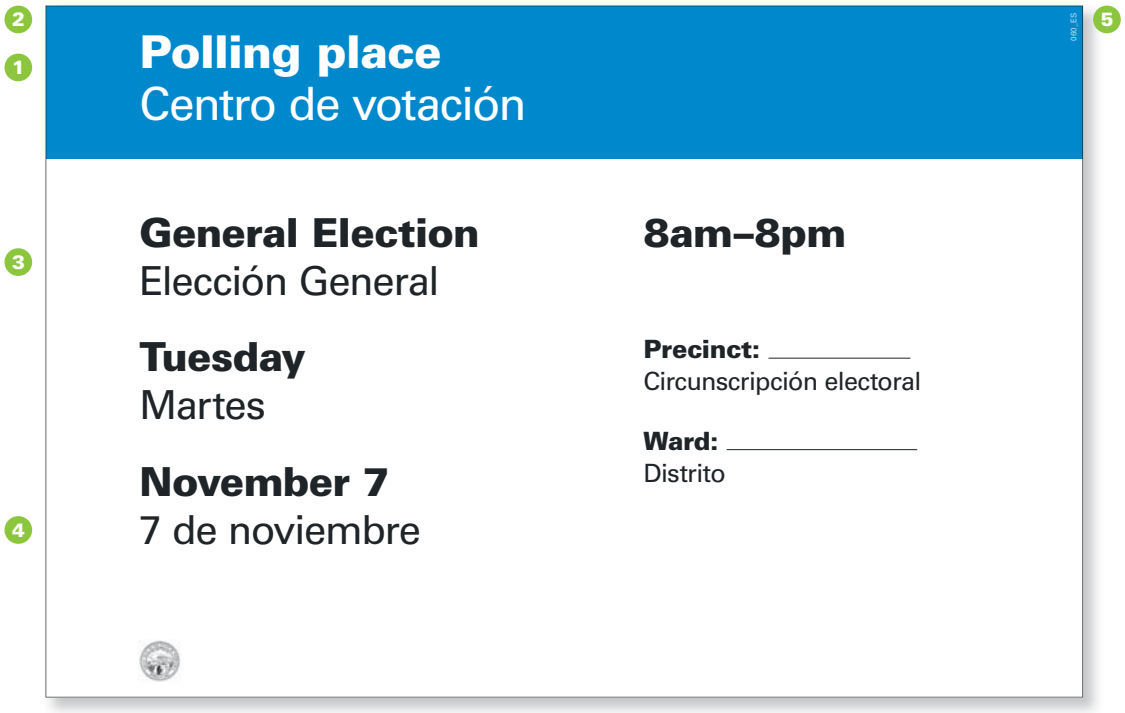
3 **Item ID number**
Type: 10 pt. Univers 55, tracking 0, 100% white.

Discussion
Message and graphics connote positive atmosphere. Consistent identification helps polling place appear organized—helps to lend credibility to voting experience.

Place signs on or near entryway to room where voting takes place and at eye level.

No editing of information necessary.

Smaller signs reinforce exterior banners. Strategic repetition of signs helps guide voters and provide assurance.



15% actual size

Polling place identification specifications
File: 060_ES_PollingPlace
Dimensions: 24" x 36"

1 **Titles**
Type: 113 pt. Univers 75 and 115 pt. Univers 55, tracking -15, leading 130 pt., 100% white

2 **Title background**
100% blue fill, 5.3" from top edge.

3 **Information**
Type: 100 pt. Univers 75 and 55, tracking -5, leading 120 pt. Space after paragraph: 1".
100% black.

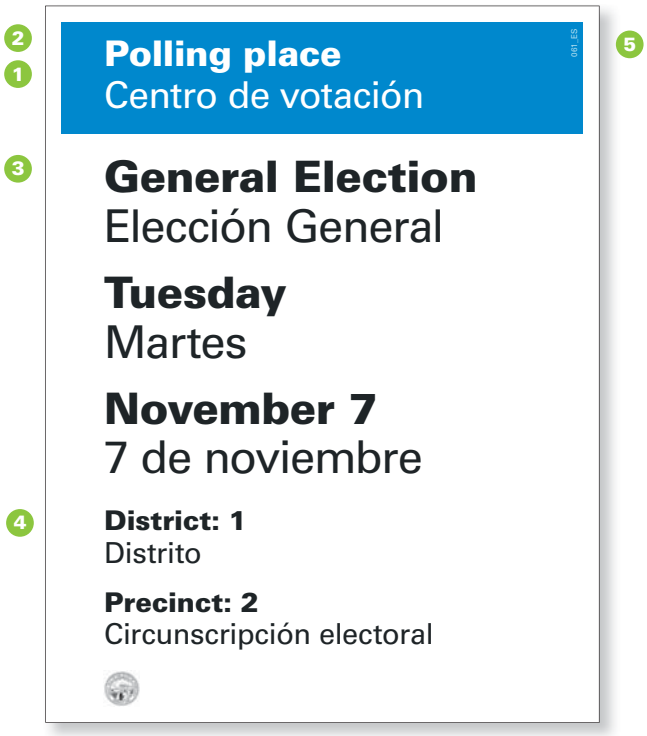
4 **Precinct/Ward**
Type: 63 pt. Univers 75 and 55, tracking -5, leading 80 pt., 100% black.

5 **Item ID number**
Type: 20 pt. Univers 55, tracking 0, 30% blue.

Discussion
Precinct, hours, and date information is required by HAVA. Template can be produced in quantity to reduce costs.

Handwritten information should be legible and of a similar size and weight of the printed text. Consider printing information via ink jet or laser printer on stickers that can then be applied to signs.

For exterior use and should be produced on weatherproof material.



25% actual size

Polling place identification—door format specifications
File: 061_ES_PollingPlace_Door
Dimensions: 8.5" x 11"

1 **Titles**
Type: 39 pt. Univers 75, tracking -5, and 41 pt. Univers 55, tracking -10, leading 46 pt., 100% white.

2 **Title background**
100% blue fill, 2" from top edge, 0.25" margin top and side edges.

3 **Information**
Type: 48 pt. Univers 75, tracking -5 and 50 pt. Univers 55, tracking -15, leading 55 pt., Space after paragraph: 0.25". 100% black.

4 **District/Precinct**
Type: 30 pt. Univers 75, tracking -5 and 32 pt. Univers 55, tracking -5, leading 36 pt., Space after paragraph: .25". 100% black.

5 **Item ID number**
Type: 9 pt. Univers 55, tracking 0, 30% blue.

Discussion
Precinct, hours, and date information is required by HAVA. Template can be produced in quantity for reduced costs.

Handwritten information should be legible and of a similar size and weight of the printed text. Consider printing information via ink jet or laser printer on stickers that can then be applied to signs for accurate localization.

For interior use; place at eye level (approximately 5 feet above ground).

25% actual size

Precinct identification specifications
File: 070_ES_Precinct
Actual dimensions: 11" x 8.5"

1 **Titles**
Type: 63 pt. Univers 75, tracking -5, and 65 pt. Univers 55, tracking -30, leading 68 pt., 100% white.

2 **Precinct number**
Type: 425 pt. Univers 65, tracking -30, 100% white.

3 **Background**
Place file: starfield.eps

4 **Item ID number**
Type: 10 pt. Univers 55, tracking 0, 100% white.

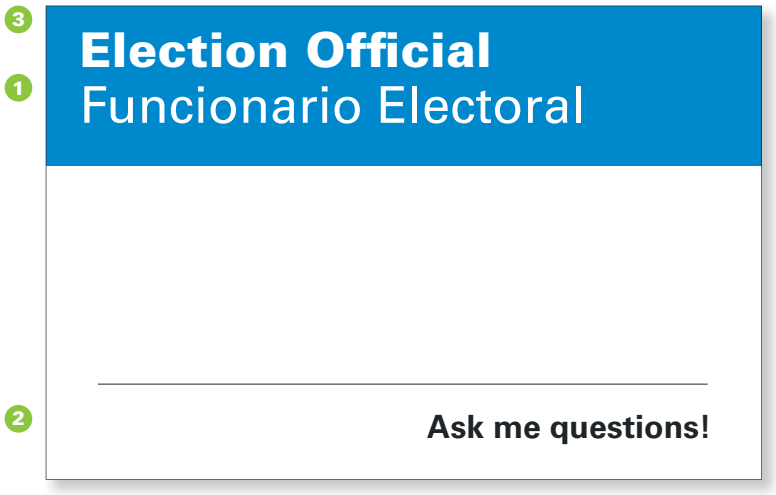
Discussion
This information is HAVA required.

Precinct can be replaced with applicable division name.

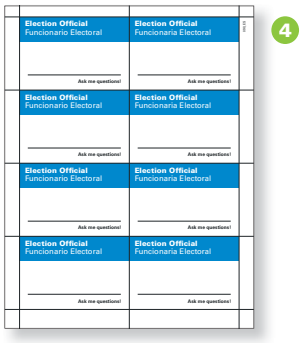
This poster can also guide voters when more than one precinct is located in the same polling place.

Place near precinct-specific poll workers on freestanding sign holder. For example, at the beginning of a voting line, near the voting booths or appropriate ballot box.

For exterior/interior use; place at eye level.



detail, 100% of actual size



15% actual size

Poll worker identification specifications
File: 090_ES_Pollworkers
Actual dimensions: 8 per 8.5 x 11"

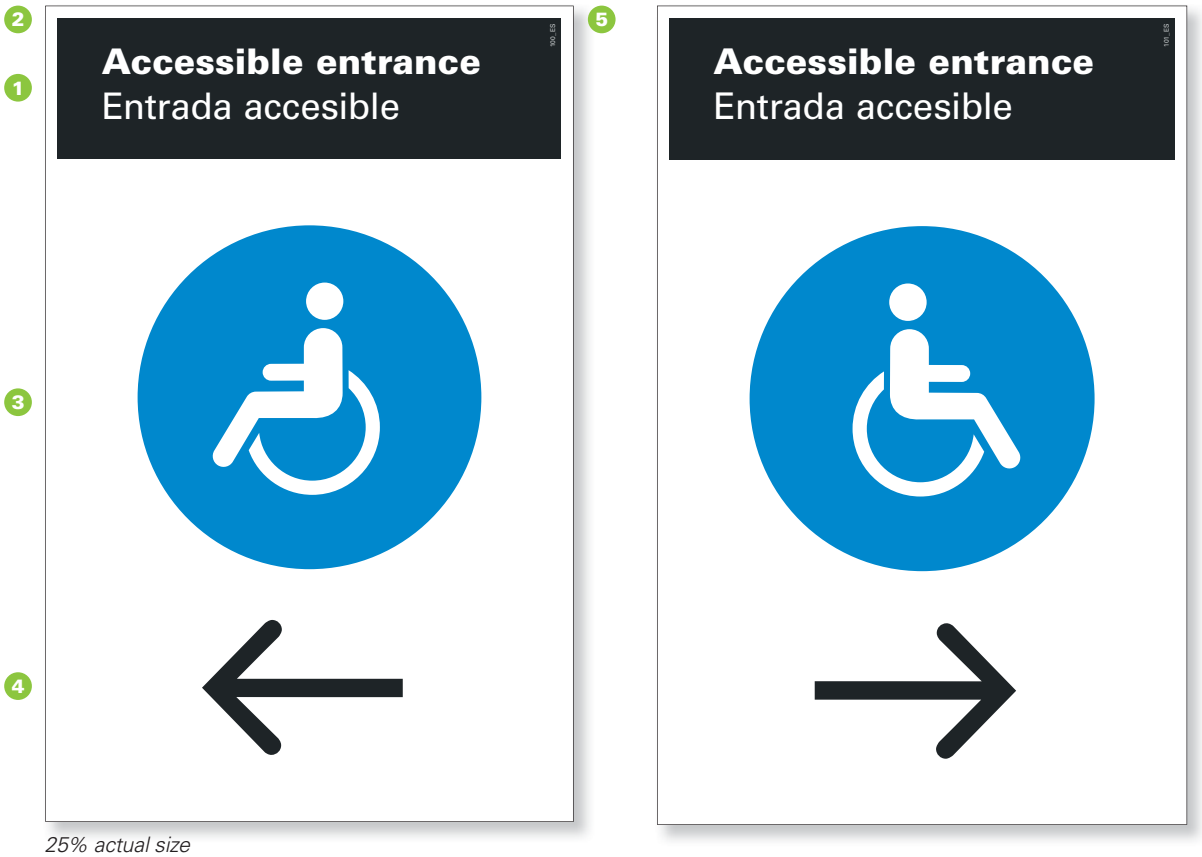
1 **Titles**
Type: 18 pt. Univers 75, tracking 5, and 19 pt. Univers 55, leading 21 pt., tracking 0, 100% white.

2 **Ask me questions!**
Type: 12 pt. Univers 65, tracking 0, 100% black.

3 **Title background**
Height: 0.84", 100% blue.

4 **Item ID number**
Type: 8 pt. Univers 55, tracking 0, 100% black.

Discussion
These may be printed on an office printer using commonly available adhesive labels or name badges.



25% actual size

Accessible entrance specifications
Files:
100_ES_AccessL
101_ES_AccessR
Dimensions: 11" x 17"

1 **Titles**
Type: 53 pt. Univers 75, tracking 10, and 55 pt. Unvers 55, tracking 5, leading 67 pt., 100% white.

2 **Title background**
100% black fill, 3" from top edge, 0.25" margin top and side edges.

3 **Icons**
7.25" diameter, 100% blue,

4 **Arrow**
2.8" in height, 100% black.

5 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% black.

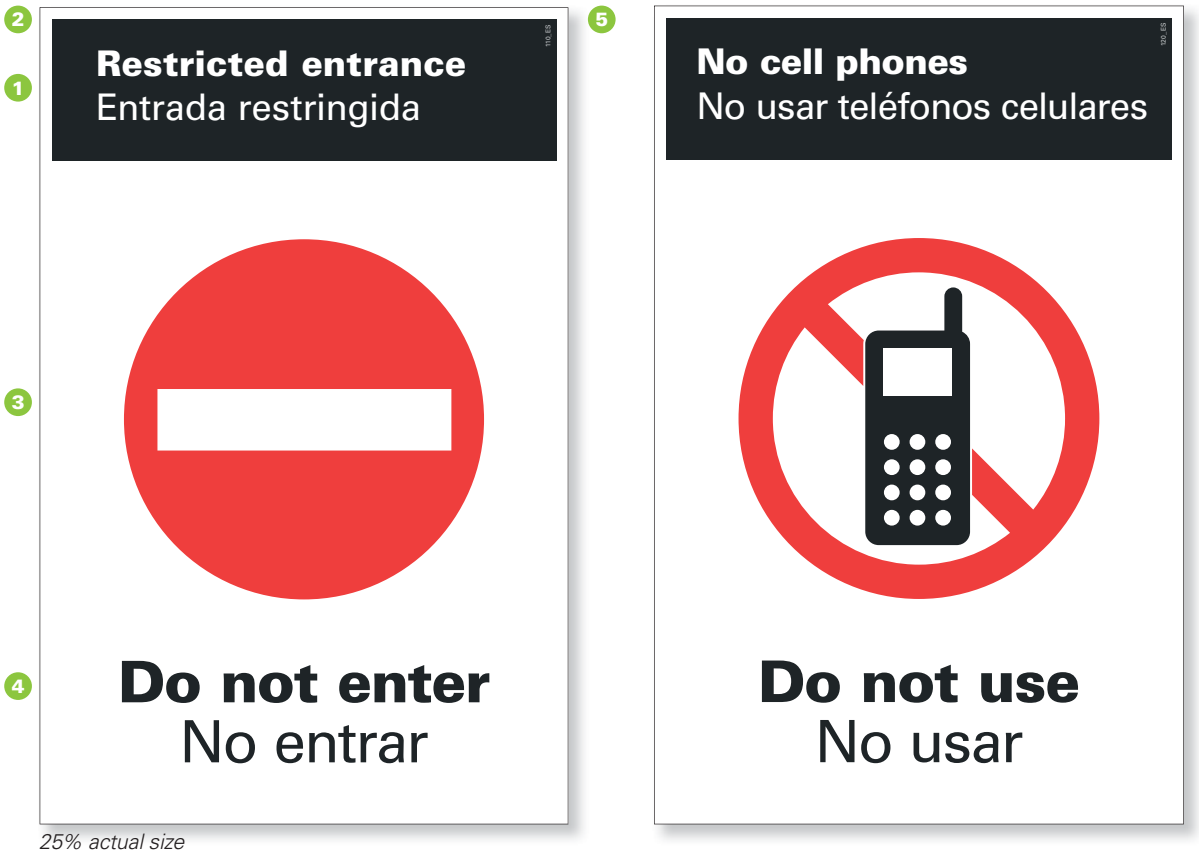
Discussion
This information is HAVA required.

Primarily used for older buildings; newer buildings should be ADA compliant.

Place directional signs at main entrance.

To identify accessible entrance, remove arrow or use Vote here! poster (File: 080_E_VoteHere).

Place at eye level (approximately 5 feet above ground).



25% actual size

Do not enter, No cell phones specifications
Files:
110_E_NoEnter
120E_NoCell
Dimensions: 11" x 17"

1 **Titles**
Type: 53 pt. Univers 75, tracking 10, and 55 pt. Unvers 55, tracking -10, leading 67 pt., 100% white.

2 **Title background**
100% black fill, 3" from top edge, 0.25" margin top and side edges.

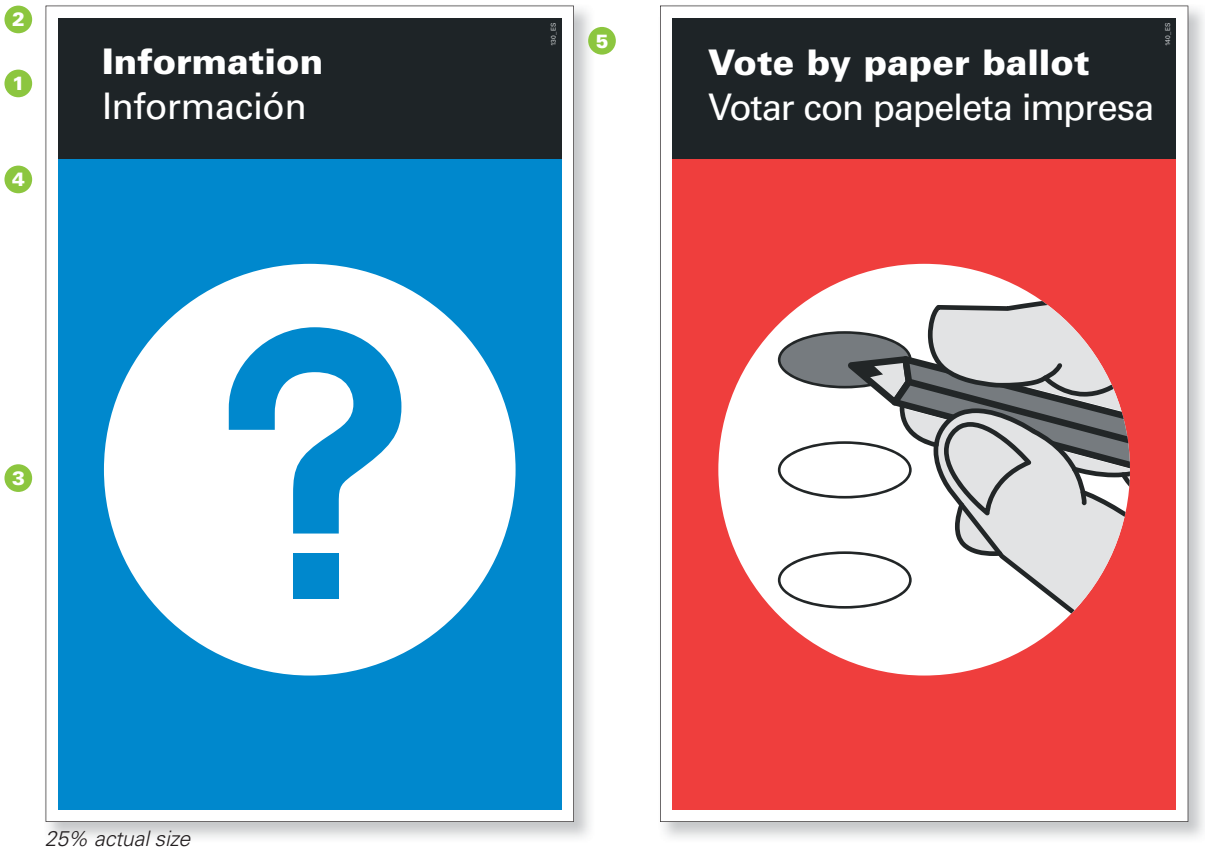
3 **Icons**
7.5" diameter, 100% red.

4 **Instructions**
Type: 86 pt. Univers 75, and 87.5 pt. Univers 55, tracking -10, leading 90 pt., 100% black.

5 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% black.

Discussion
The restricted entrance information is required (if applicable).

Place at eye level (approximately 5 feet above ground).



25% actual size

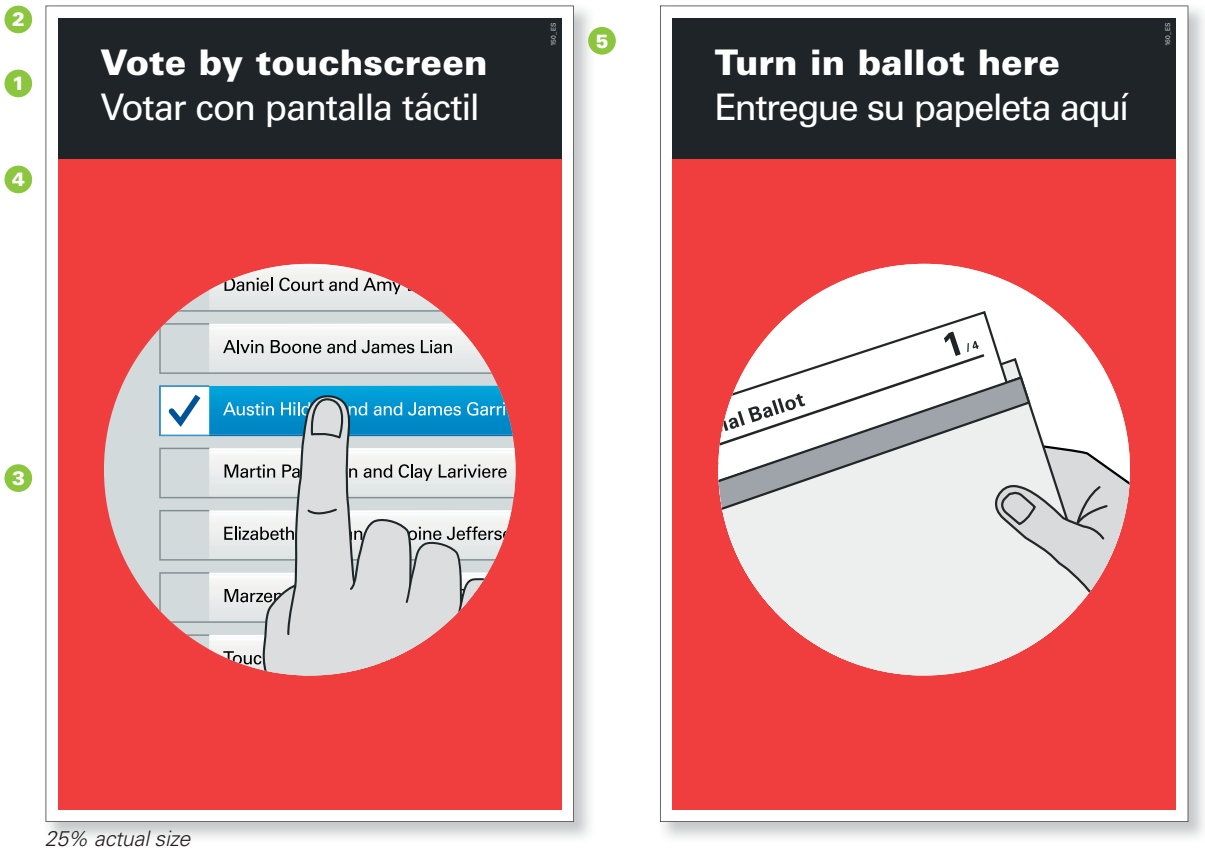
Wayfinding poster specifications
Files:
130_ES_Info
140_ES_OpScan
Dimensions: 11" x 17"

1. **Titles**
   Type: 53 pt. Univers 75, tracking 10, and 55 pt. Univers 55, tracking 5, 67 pt. leading, 100% white.
2. **Title background**
   100% black fill, 3" from top edge, 0.25" margin top and side edges.
3. **Icons**
   All 8.5" diameter
   Place file: OpScan_Oval.eps
4. **Background**
   100% blue or red, 0.25" margin bottom and side edges.
5. **Item ID number**
   Type: 10 pt. Univers 55, tracking 0, 30% black.

Discussion
Place as close as possible to applicable station or desk. Hanging from ceiling or via freestanding sign holder may be necessary to provide visibility and guide voters through the process. Taping signs to table tops or fronts often offers insufficient visibility.

For interior use; place at eye level (approximately 5 feet above ground) or higher.

For optical scan ballots that use an arrow to indicate a selection, use the file titled 140_ES_OpScanAlt.



25% actual size

Wayfinding poster specifications
Files:
150_ES_Touchscreen
160_ES_ReturnBallot
Dimensions: 11" x 17"

1 **Titles**
Type: 53 pt. Univers 75, tracking 10, and 55 pt. Univers 55, tracking 5, 67 pt. leading, 100% white.

2 **Title background**
100% black fill, 3" from top edge, 0.25" margin top and side edges.

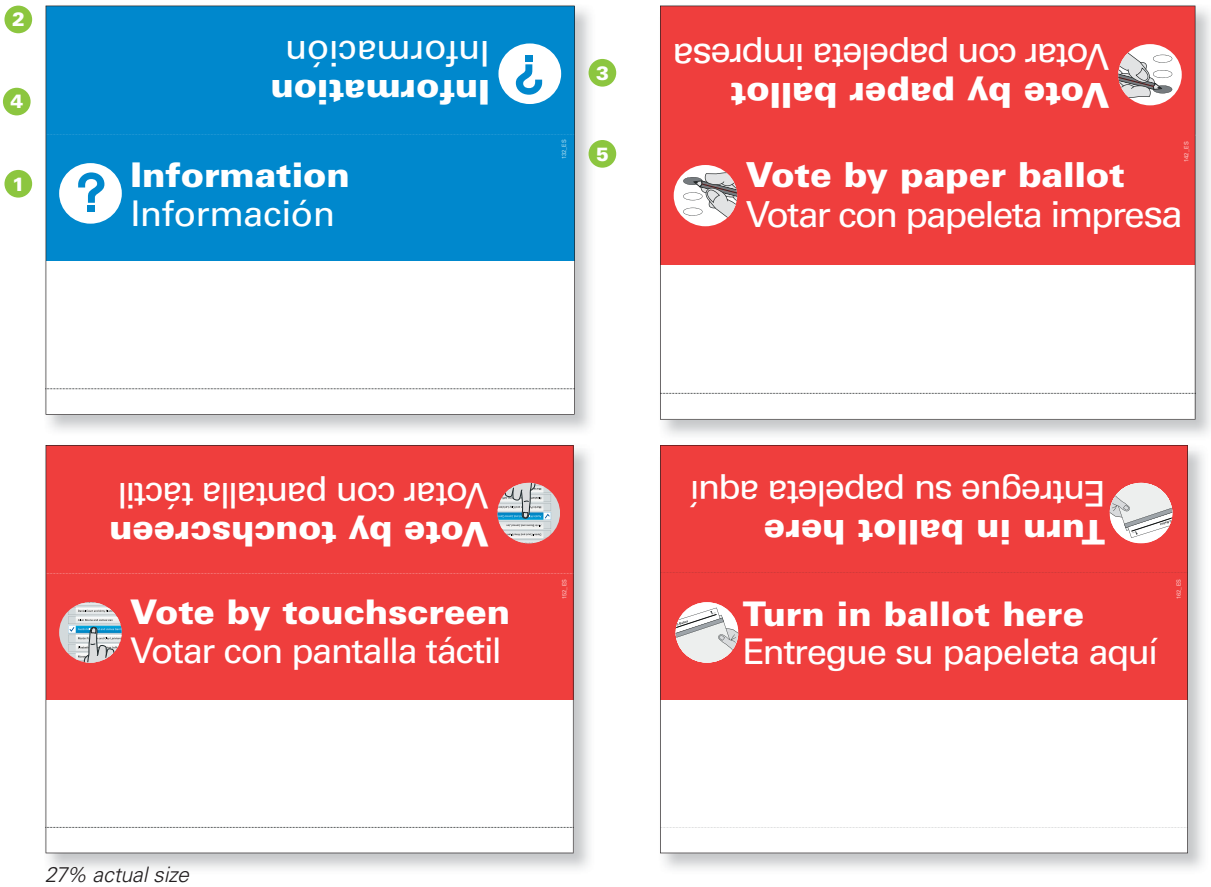
3 **Icons**
8.5" diameter
Place files:
Touchscreen.eps
Return_Ballot.eps

4 **Background**
100% red, 0.25" margin bottom and side edges.

5 **Item ID number**
Type: Univers 55, size 10 pt., tracking 0, 30% black.

Discussion
Place as close as possible to applicable station or desk. Hanging from ceiling or via freestanding sign holder may be necessary to provide visibility and guide voters through the process. Taping signs to table tops or fronts often offers insufficient visibility.

For interior use; place at eye level (approximately 5 feet above ground) or higher.



27% actual size

Wayfinding—tabletop specifications
Files:
132_ES_Info_Tabletop
142_ES_OpScan_Tabletop
152_ES_Touchscreen_Tabletop
162_ES_ReturnBallot_Tabletop
Dimensions: 10″ x 8″

1 **Titles**
Type: 48 pt. Univers 75, tracking 10, and 50 pt. Univers 55, tracking 5, 55 pt. leading, 100% white.

2 **Title background**
100% blue or 100% red, 2.5″ from top edge.

3 **Icons**
1.1863″ diameter, 0.25″ from edge.
Files:
OpScan_Oval.eps
Touchscreen.eps
ReturnBallot.eps

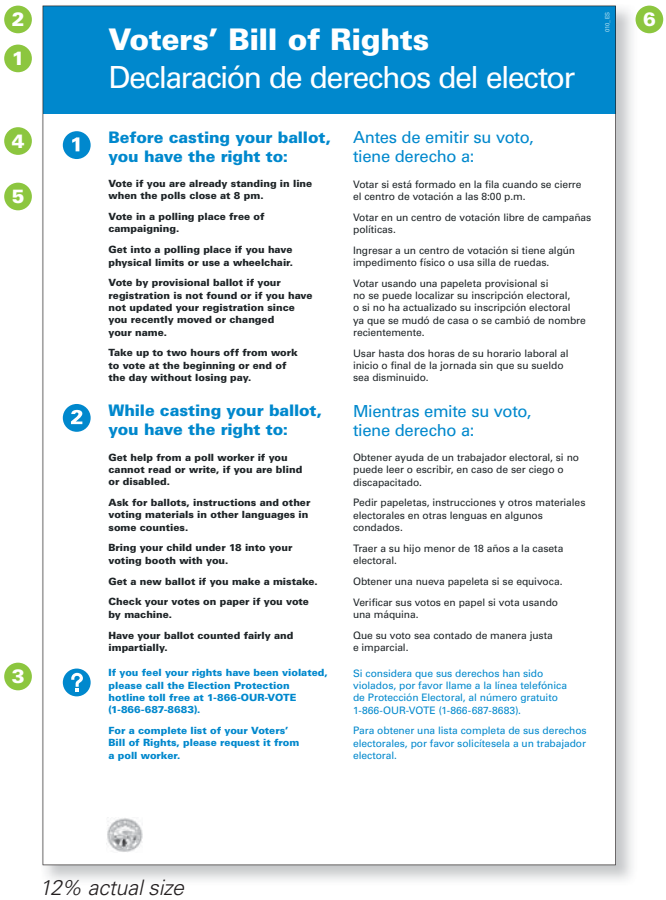
4 **Fold marks**
2.75″ and 7.75″ from top.

5 **Item identification number**
Type: 8 pt. Univers 55, tracking 0, 30% blue or red.

Discussion
Assembly: trim to 8″ x 10″, removing white margin. Use fold marks to form triangular shape and attach tab with tape.

assembled

For optical scan ballots that use an arrow to indicate a selection, use the file entitled: 142_ES_OpScan_TabletopAlt.



12% actual size

Voters' Bill of Rights specifications

File: 010_ES_Rights
Dimensions: 24" x 36"

1 Titles
Type: 90 pt. Univers 75, tracking 0, and 92 pt. Univers 55, tracking -30, 100% white.

2 Title background
100% blue fill, 4.75" from top edge.

3 Icons
1.167" diameter, 0.833" from left edge.

4 Subheads
Type: 48 pt. Univers 75, tracking 0, and 50 pt. Univers 55, tracking -5, 100% blue.

5 Text
Type: 30 pt. Univers 75, tracking 0, and 31 pt. Univers 55, tracking -5, leading 37 pt. Space after paragraph: 0.3611". 100% black and 100% blue for special cases (e.g., contact information).

6 Item ID number
Type: 18 pt. Univers 55, tracking 0, 30% blue.

Discussion

This material is HAVA required.

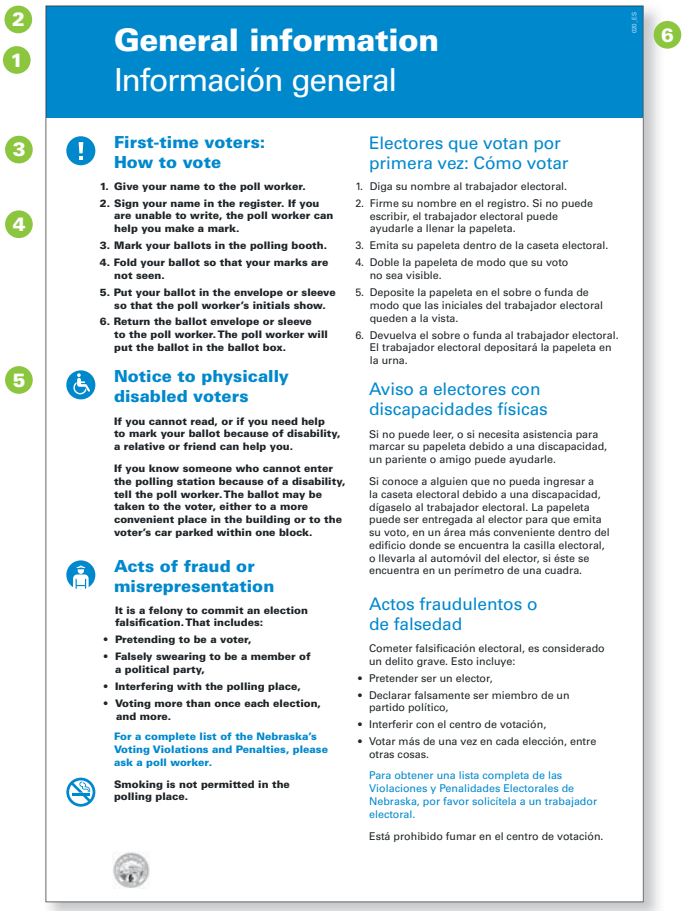
Place in visible locations—near waiting areas or where long lines form.

Voters should read this material before voting.

Organize information into three to four categories that can be highlighted, as shown here, so that the poster is easy to scan from a distance.

For interior use; mount on wall or place on stand.

Content needs to be modified for each State. The Voters' Bill of Rights content in this instance pertains specifically to Nebraska law. Election officials will have to download the editable version of this template (.indd) to edit the text for consistency with the requirements of their State.



12% actual size

General information specifications

File: 020_ES_Info
Dimensions: 24″ x 36″

1 Titles
Type: 90 pt. Univers 75, tracking 0, and 92 pt. Univers 55, tracking -30, 100% white.

2 Title background
100% blue fill, 4.75″ from top edge.

3 Icons
1.167″ diameter, 0.833″ from left edge.

4 Subheads
Type: 48 pt. Univers 75, tracking 0, and 50 pt. Univers 55, tracking -5, 100% blue.

5 Text
Type: 30 pt. Univers 75, tracking 0, and 31 pt. Univers 55, tracking -5, leading 37 pt. Space after paragraph: 0.3611″. 100% black and 100% blue for special cases (e.g., contact information).

6 Item ID number
Type: 18 pt. Univers 55, tracking 0, 30% blue.

Discussion

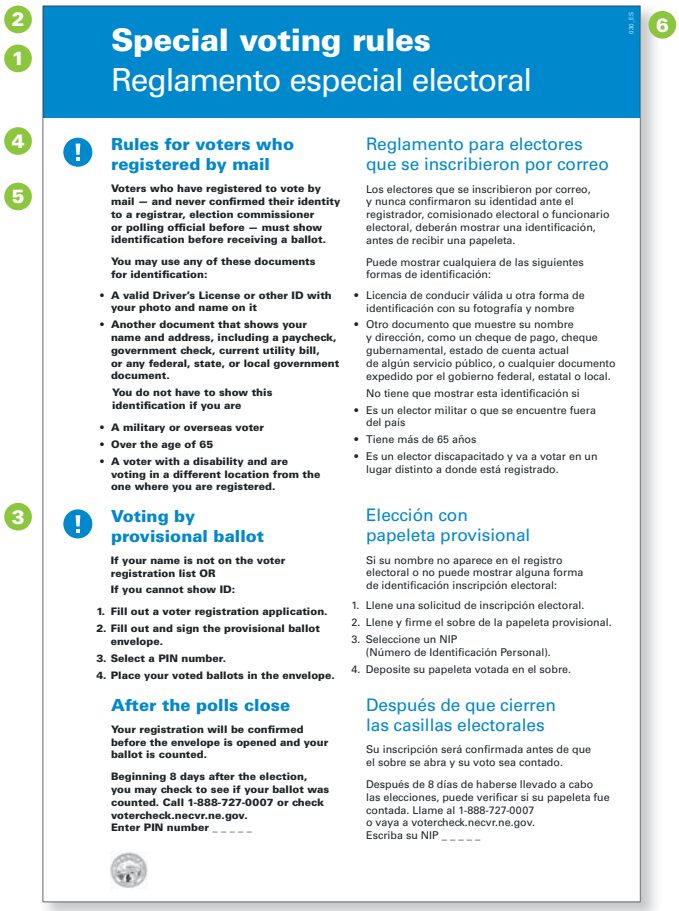
Posting this information is a HAVA requirement. Content needs to be modified for each State.

Place in visible locations—near waiting areas or where long lines form.

Voters should read this material before voting.

Organize information into three to four categories that can be highlighted, as shown here, so that the poster is easy to scan from a distance.

For interior use; mount on wall or place on stand.



12% actual size

Special Voting Rules specifications

File: 030_ES_SpecialRules
Dimensions: 24″ x 36″

1 Titles
Type: 90 pt. Univers 75, tracking 0, and 92 pt. Univers 55, tracking -30, 100% white.

2 Title background
100% blue fill, 4.75″ from top edge.

3 Icons
1.167″ diameter, 0.833″ from left edge.

4 Subheads
Type: 48 pt. Univers 75, tracking 0, and 50 pt. Univers 55, tracking -5, 100% blue.

5 Text
Type: 30 pt. Univers 75, tracking 0, and 31 pt. Univers 55, tracking -5, leading 37 pt. Space after paragraph: 0.3611″. 100% black and 100% blue for special cases (e.g., contact information).

6 Item ID number
Type: 18 pt. Univers 55, tracking 0, 30% blue.

Discussion

Posting this information is a HAVA requirement. Content needs to be modified for each State.

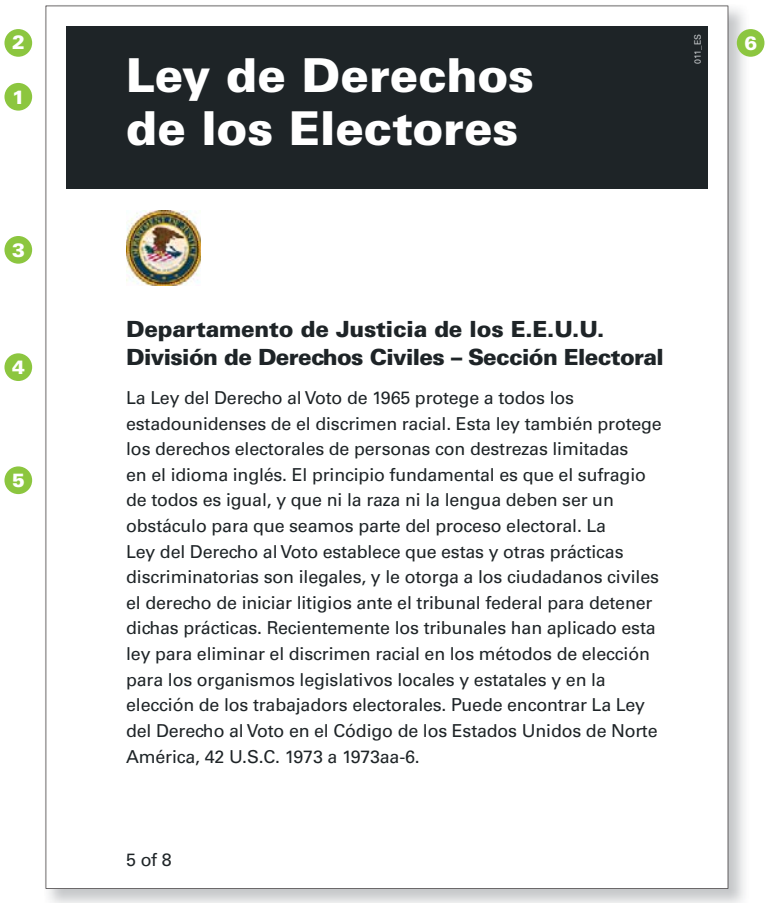
Place in visible locations—near waiting areas or where long lines form.

Voters should read this material before voting.

Organize information into three to four categories that can be highlighted, as shown here, so that the poster is easy to scan from a distance.

For interior use; mount on wall or place on stand.

Content needs to be modified for each State.



42% actual size

Voters' Bill of Rights—binder format specifications
File: 011_ES_Rights_Binder
Dimensions: 8.5" x 11"

1 **Title**
Type: 42 pt. Univers 75, tracking 0, leading 48 pt., 100% white.

2 **Title background**
100% black fill, 2.25" from top edge, 0.25" margin all edges.

3 **State seal**
1" diameter, 1" from left edge.

4 **Subheads**
Type: 20 pt. Univers 75, tracking -15, leading 25 pt., 100% black.

5 **Text**
Type: 16 pt. Univers 55, tracking 0, leading 23 pt., 100% black.

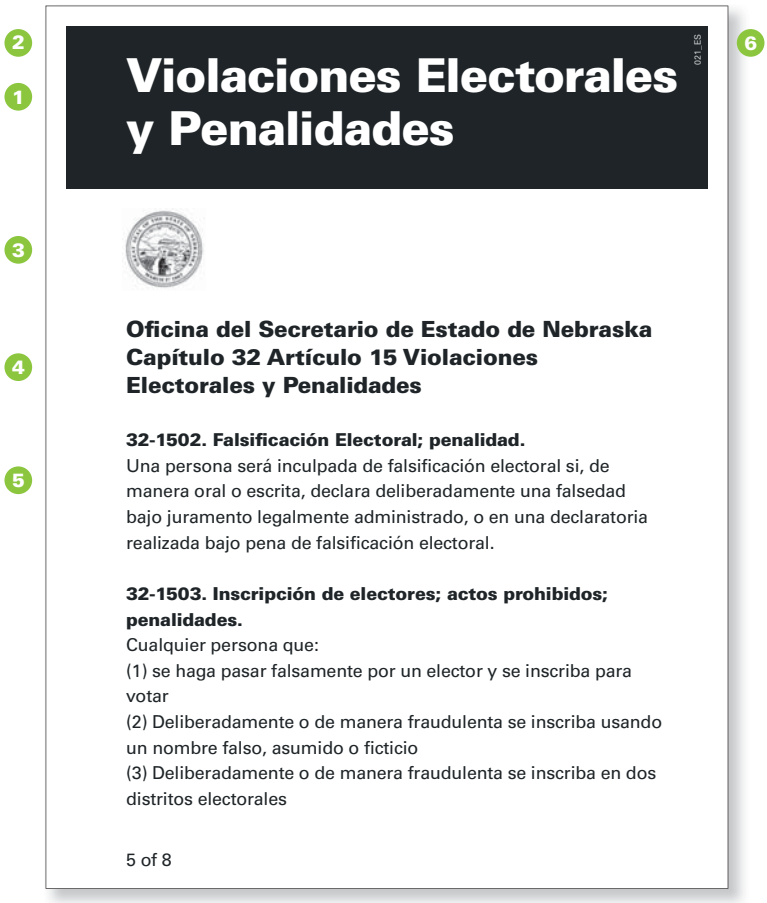
6 **Item ID number**
Type: 8 pt. Univers 55, tracking 0, 30% black.

Discussion
Assembly: three-hole punch and put in standard three-ring binder.

This format is a full-text version of the poster format (page 2.47).

Content needs to be modified for each State. The Voters' Bill of Rights content in this instance pertains specifically to Nebraska law. Election officials will have to download the editable version of this template (.indd) to edit the text for consistency with the requirements of their State.

Binders are suggested to display the full text of legally required State information that is not easily contained or read in a wall display format by voters (such as voters' rights information). Binders can also be used to display other redundant information already posted in the polling environment, such as voting instructions.



42% actual size

General information—binder format specifications
File: 021_ES_Info_Binder
Dimensions: 8.5" x 11"

1 **Title**
Type: 42 pt. Univers 75, tracking 0, leading 48 pt., 100% white.

2 **Title background**
100% black fill, 2.25" from top edge, 0.25" margin all edges.

3 **State seal**
1" diameter, 1" from left edge.

4 **Subhead**
Type: 20 pt. Univers 75, tracking -15, leading 25 pt., 100% black.

5 **Text**
Type: 16 pt. Univers 55, tracking 0, leading 23 pt., 100% black.

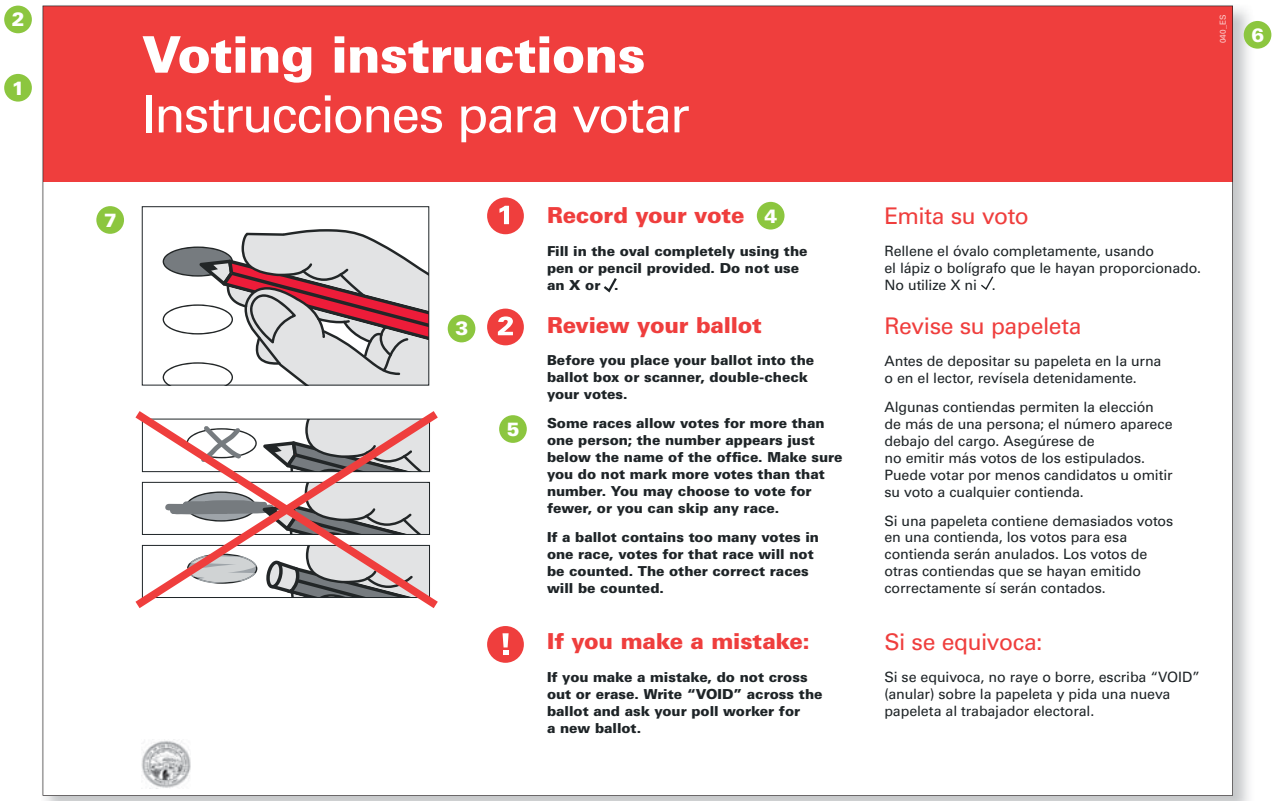
6 **Item ID number**
Type: 8 pt. Univers 55, tracking 0, 30% black.

Discussion
Assembly: three-hole punch and put in standard three-ring binder.

This format is a full-text version of the poster format (page 2.49).

Content needs to be modified for each State. The content in this instance pertains specifically to Nebraska law. Election officials will have to download the editable version of this template (.indd) to edit the text for consistency with the requirements of their State.

Binders are suggested to display the full text of legally required State information that is not easily contained or read in a wall display format by voters (such as voters' rights information). Binders can also be used to display other redundant information already posted in the polling environment, such as voting instructions.



17% actual size

Voting Instructions poster specifications
File: 040_ES_Instructions
Dimensions: 24" x 36"

1 Titles
Type: 110 pt. Univers 75, tracking 0, and 112 pt. Univers 55, tracking -15, leading 130 pt. 100% white.

2 Title background
100% red, 5.3" from top edge.

3 Icons
1.1125" diameter.

4 Subheads
Type: 48 pt. Univers 75, tracking 0, and 50 pt. Univers 55, tracking -5, leading 58 pt., 100% red.

5 Text
Type: 30 pt. Univers 75, and 31 pt. Univers 55, tracking 0, leading 37 pt. Space after paragraph: 0.3611". 100% black.

6 Item ID number
Type: 18 pt Univers 75, tracking 0, 30% red.

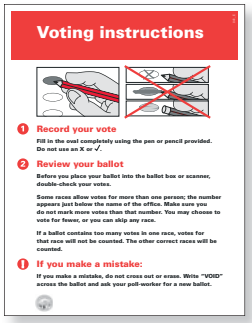
7 Illustrations
Place file: OpScan_Oval.eps

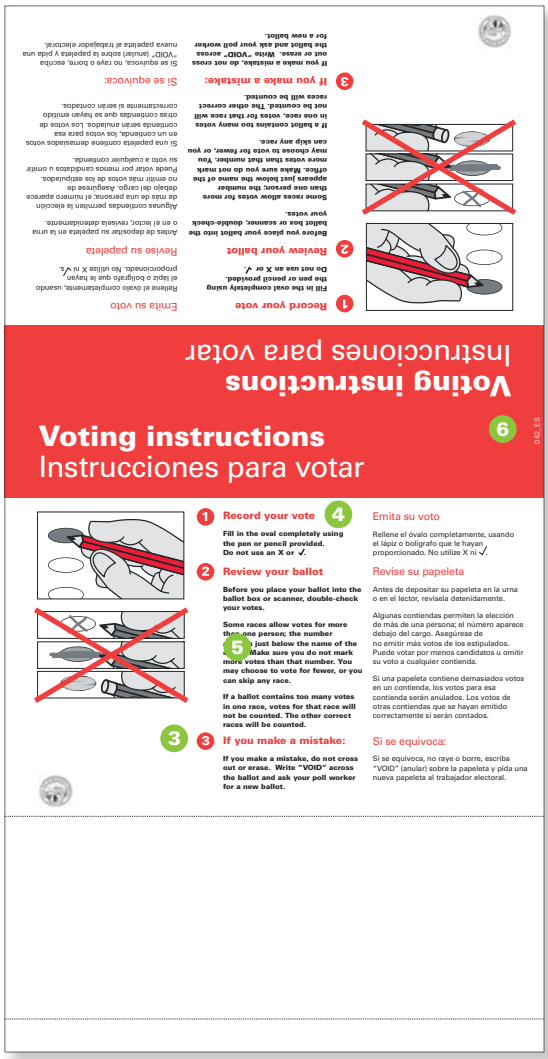
Discussion
Posting this information is a HAVA requirement. Content needs to be modified for each State.

For interior use; mount on wall or prop on stand and post near waiting area or where long lines may form.

Content needs to be modified for each State and should be based on ballot type being used.

This poster is also available in an 8.5" x 11" format, see file: 041_ES_Instructions_Booth.





35% actual size

Voting Instructions—tabletop specifications

File: 042_ES_Instructions_Tabletop
Dimensions: 8″ x 15.5″

1 Titles
Type: 30 pt. Univers 75, tracking 0, and 31.5 pt. Univers 55, tracking -10, leading 33 pt. 100% white.

2 Title background
100% red fill, 1.28″ from top edge.

3 Icons
0.26″ diameter.

4 Subheads
Type: 11 pt. Univers 75, tracking 0, and 11.5 pt. Univers 55, tracking -10, leading 13 pt., 100% red.

5 Text
Type: 8 pt. Univers 75 and 55, leading 11 pt., tracking 0. Space after paragraph: 0.3333″. 100% black.

6 Item ID number
Type: 8 pt. Univers 55, tracking 0, 30% red.

7 Illustrations
Place file: OpScan_Oval.eps

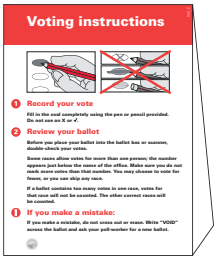
Discussion

Posting this information is a HAVA requirement. Content needs to be modified for each State.

For interior tabletop use.

Content needs to be modified for each State and should be based on ballot type being used.

Assembly: trim to 6″ x 15.5″. Use fold marks to form triangular shape and attach tab with tape.



assembled

42% actual size

Sample ballot poster specifications
File: 051_ES_Sample_Door
Dimensions: 8.5" x 11"

1 **Titles**
Type: 77 pt. Univers 75, tracking 0, and 78 pt. Univers 55, tracking -30, leading 80 pt., 100% white. 0.6" from left edge and 2" from top edge.

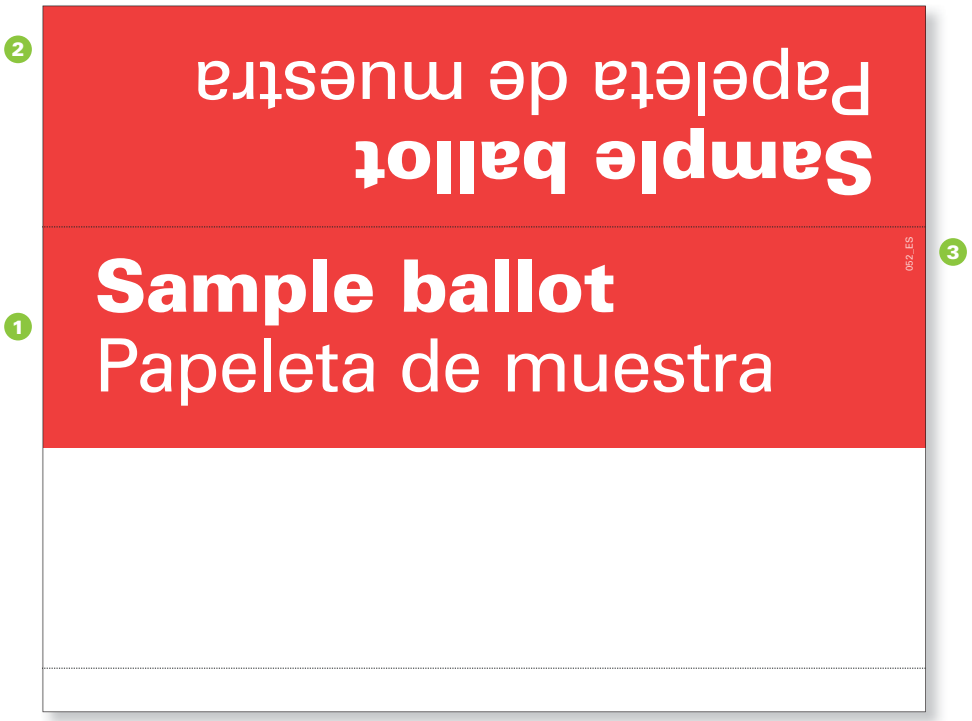
2 **Background**
100% red fill, 0.25" from edges.

3 **Item ID number**
Type: 8 pt. Univers 55, tracking 0, 30% red.

Discussion
Posting this information is a HAVA requirement.

Use to draw attention to actual sample ballots.

No editing of information necessary.



46% actual size

Sample ballot—tabletop specifications
File: 052_ES_Sample_Tabletop
Dimensions: 8″ x 10″

1 **Titles**
Type: 59 pt. Univers 75, tracking 0, and 60 pt. Univers 55, tracking -10, leading 65 pt., 100% white.

2 **Background**
100% red fill, 5″ high.

3 **Item ID number**
Type: 8 pt. Univers 55, tracking 0, 30% red.

Discussion
Posting this information is a HAVA requirement.

Use to draw attention to actual sample ballots.

No editing of information necessary.

Assembly: trim to 8″ x 10″, removing white margin. Use fold marks to form triangular shape and attach tab with tape.

assembled

Samples: two languages

The design best practices detailed in the previous section are applied to voter information materials in English and Chinese on pages 2.57–2.65. Identification, wayfinding, and instruction/information items are illustrated; their electronic file names are also included. The samples demonstrate the flexibility of the best practice designs and their applicability to a variety of voter information materials.

The typeface used for the Chinese text is LeiHi Pro Medium.* Throughout these samples the Chinese text is set at approximately the same size as the English text (see pages 2.34–2.55 for additional two-language specifications).

The sample Chinese text in this section has been professionally translated, but translations do not reflect a specific elections expertise.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.

Voters' Bill of Rights
投票者權利法案/通告

010_EC

1 Before casting your ballot, you have the right to:

Vote if you are already standing in line when the polls close at 8 pm.

Vote in a polling place free of campaigning.

Get into a polling place if you have physical limits or use a wheelchair.

Vote by provisional ballot if your registration is not found or if you have not updated your registration since you recently moved or changed your name.

Take up to two hours off from work to vote at the beginning or end of the day without losing pay.

在您投票之前，您有權:

投票，如果在下午8點投票點關閉時，您已經在投票隊伍中排隊。

在沒有競選游說活動的投票點投票。

進入投票所，如果您活動不自如或使用輪椅。

通過臨時選票投票，如果找不到您的注冊資訊，或您在最近搬家或更改名字後還沒有更新登記的資訊。

在選舉當天開始或結束前用至多兩小時的工作時間投票，不會丟掉這兩小時的薪水。

2 While casting your ballot, you have the right to:

Get help from a poll worker if you cannot read or write, if you are blind or disabled.

Ask for ballots, instructions and other voting materials in other languages in some counties.

Bring your child under 18 into your voting booth with you.

Get a new ballot if you make a mistake.

Check your votes on paper if you vote by machine.

Have your ballot counted fairly and impartially.

在您投票時，您有權：

從投票點工作人員那裏獲得幫助，如果您不知道如何讀或寫，或如果您是盲人或殘障人士。

在某些縣要求提供其它語言的選票、説明以及其他的投票資料。

帶領您18歲以下的孩子進入投票站。

得到一張新選票，如果您出錯的話。

在紙上檢查您的投票，如果您使用機器投票。

要求您的選票在計數時得到公平和無偏見對待。

If you feel your rights have been violated, please call the Election Protection hotline toll free at 1-866-OUR-VOTE (1-866-687-8683).

For a complete list of your Voters' Bill of Rights, please request it from a poll worker.

如果您覺得您的權利被侵犯了，請給免費的競選保護熱綫打電話，號碼是：
1-866-OUR-VOTE (1-866-687-8683)。

您可以向投票站的工作人員索取一份完整的投票者權利法案表。

20% actual size

File name
010_EC_Rights

See pages 2.34–2.55 for additional production specifications.

020_EC

General information
一般說明

First-time voters: How to vote

1. **Give your name to the poll worker.**
2. **Sign your name in the register. If you are unable to write, the poll worker can help you make a mark.**
3. **Mark your ballots in the polling booth.**
4. **Fold your ballot so that your marks are not seen.**
5. **Put your ballot in the envelope or sleeve so that the poll worker's initials show.**
6. **Return the ballot envelope or sleeve to the poll worker. The poll worker will put the ballot in the ballot box.**

第一次投票的選民：如何投票

1. 告訴投票點工作人員您的名字。
2. 在登記冊中簽上您的名字。如果您不會寫，投票點工作人員可以幫您做標記。
3. 在投票站給您選票的選項上做標記。
4. 把您的選票折疊好，使您的選項不會被別人看見。
5. 將您的選票放入信封或信袋，露出投票站工作人員姓名起首的大寫字母。
6. 把選票信封或信袋交還給投票點工作人員。投票點工作人員將把選票投入投票箱。

Notice to physically disabled voters

If you cannot read, or if you need help to mark your ballot because of disability, a relative or friend can help you.

If you know someone who cannot enter the polling station because of a disability, tell the poll worker. The ballot may be taken to the voter, either to a more convenient place in the building or to the voter's car parked within one block.

給身體殘疾選民的通知

如果您不識字，或因爲傷殘而在選票上做標記時需要幫助，您的某一位親戚或朋友可以向您提供幫助。

如果您知道某位人士由於傷殘的原因不能進入投票所，請告訴投票站的工作人員。選票能被直接遞送給投票者，遞送的地點可以是建築物內一個更加方便的場所或是停靠在一個街區範圍之內的投票者的車內。

Acts of fraud or misrepresentation

It is a felony to commit an election falsification. That includes:

- **Pretending to be a voter,**
- **Falsely swearing to be a member of a political party,**
- **Interfering with the polling place,**
- **Voting more than once each election, and more.**

For a complete list of the Nebraska's Voting Violations and Penalties, please ask a poll worker.

欺騙行爲或誤傳

選舉造假是重罪。
它包括：

- 僞稱是選民，
- 虛假宣誓（自己）是某一政黨的成員
- 干涉投票所的工作，
- 每次選舉不止一次投票。

您可以向投票站的工作人員索取一份完整的內布拉斯加州反投票規則和懲罰目錄。

Smoking is not permitted in the polling place.

投票場所禁止吸煙。

20% actual size

File name
020_EC_Info

See pages 2.34–2.55 for additional production specifications.

030_EC

Special voting rules
特殊投票規則

Rules for voters who registered by mail

Voters who have registered to vote by mail — and never confirmed their identity to a registrar, election commissioner or polling official before — must show identification before receiving a ballot.

You may use any of these documents for identification:

- **A valid Driver's License or other ID with your photo and name on it**
- **Another document that shows your name and address, including a paycheck, government check, current utility bill, or any federal, state, or local government document.**

You do not have to show this identification if you are

- **A military or overseas voter**
- **Over the age of 65**
- **A voter with a disability and are voting in a different location from the one where you are registered.**

用郵件登記的選民規則

通過信件登記，且從未向登記員、選舉委員或投票官員確認其身份的投票者必須在獲得選票之前出示身份證明。

您可以使用以下文件中的任何一項作爲身份證明：

- 有效的駕駛執照或其他帶有您照片和姓名的身份證。
- 其他顯示您姓名、地址的文件，包括工資支票、政府發放的救濟金支票、近期的水電、煤氣費賬單或任何聯邦、州或地方政府的文件。

如果您符合以下任何一項，既不必出示您的身份證明：

- 軍人或國外選民
- 超過65歲
- 有傷殘的選民，并且是在與您登記的地點不同的地方投票。

Voting by provisional ballot

If your name is not on the voter registration list OR

If you cannot show ID:

1. **Fill out a voter registration application.**
2. **Fill out and sign the provisional ballot envelope.**
3. **Select a PIN number.**
4. **Place your voted ballots in the envelope.**

用臨時選票投票

如果您的名字不在選民登記名單或者
如果您不能出示身份證明：

1. 填寫一份選民登記申請。
2. 填寫臨時選票信封並簽名。
3. 選擇一個個人密碼。
4. 將填寫完成的選票放入信封。

After the polls close

Your registration will be confirmed before the envelope is opened and your ballot is counted.

Beginning 8 days after the election, you may check to see if your ballot was counted. Call 1-888-727-0007 or check votercheck.necvr.ne.gov.
Enter PIN number _ _ _ _ _

在投票點關閉以後

在裝有您選票的信封被打開、您的選票被計數之前，您的註冊會得到確認。

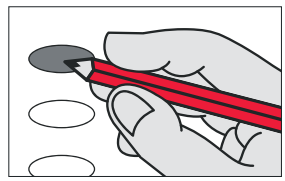
競選開始8天以後，您可以檢查您的選票是否被計數。請 致電1-888-727-0007或訪問votercheck.necvr.ne.gov，輸入您的個人密碼 _ _ _ _ _。

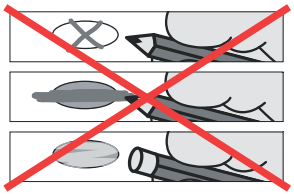
20% actual size

File name
030_EC_SpecialRules

See pages 2.34–2.55 for additional production specifications.

Voting instructions
投票説明





1 Record your vote

Fill in the oval completely using the pen or pencil provided. Do not use an X or ✓.

記錄您的投票

使用提供的圓珠筆或鉛筆把橢圓形完全塗黑。不要打叉或勾。

2 Review your ballot

Before you place your ballot into the ballot box or scanner, double-check your votes.

Some races allow votes for more than one person; the number appears just below the name of the office. Make sure you do not mark more votes than that number. You may choose to vote for fewer, or you can skip any race.

If a ballot contains too many votes in one race, votes for that race will not be counted. The other correct races will be counted.

檢查您的選票

在把選票放入投票箱或掃描器之前，請仔細核對您的選項。

某些競選允許您投票支持的人數超過一個；規定的人數顯示在該職位名稱的下方。請確定您投票的人數不超過該數目。您可以選擇為少於該數的人投票，或者跳過任何一次競選。

如果一次競選中的某張選票上包含了太多的選項，該次競選的選票將不被計數。其他正確的競選選票將被計算在內。

! If you make a mistake:

If you make a mistake, do not cross out or erase. Write "VOID" across the ballot and ask your poll worker for a new ballot.

如果您出錯了：

如果您出錯了，請不要刪除或塗抹選項。請在選票上書寫“VOID（該詞的意思是“無效的”）”，在書寫該單詞時請注意要穿過整張選票。並向您所在投票點的工作人員索要一張新的選票。

040_EC

16% actual size

File name
040_EC_Instructions

See pages 2.34–2.55 for additional production specifications.

16% actual size

File name
060_EC_PollingPlace

See pages 2.34–2.55 for additional production specifications.

25% actual size

File name
100_EC_AccessL

See pages 2.34–2.55 for additional production specifications.

File name
101_EC_AccessR

See pages 2.34–2.55 for additional production specifications.

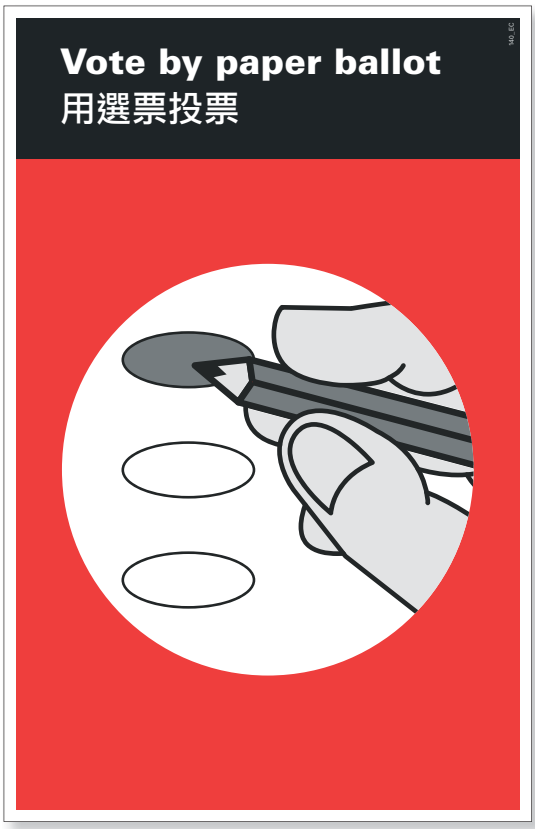
25% actual size

File name
110_EC_NoEnter

See pages 2.34–2.55 for additional production specifications.

File name
120_EC_Info

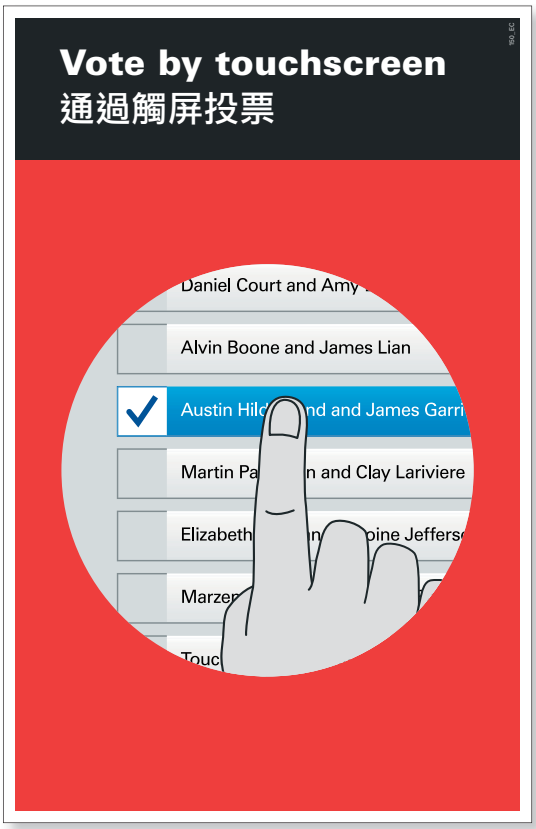
See pages 2.34–2.55 for additional production specifications.



20% actual size

File name
140_EC_OpScan

See pages 2.34–2.55 for additional production specifications.



File name
150_EC_Touchscreen

See pages 2.34–2.55 for additional production specifications.

43% actual size

File name
051_EC_Sample_Door

See pages 2.34–2.55 for additional production specifications.

Effective Designs for the Administration of Federal Elections

Section 3: Optical scan ballots

June 2007

U.S. Election Assistance Commission

Optical scan ballots

This section has three parts: (1) planning process information; (2) one-language ballot design best practices and samples; and (3) two-language ballot design best practices and samples.

Planning
The Planning section (pages 3.4–3.5) outlines how to incorporate resources into your ballot development and production process; in what areas those resources may be of assistance; and when those activities should occur. It also offers tips on possible challenges and opportunities. These suggestions apply to both one-language and two-language ballots.

Design
For both one-language (page 3.6) and two-language ballots (page 3.34), best practice samples are illustrated in full and by component. These components and samples are accompanied by production specifications and discussion notes.

Samples
Samples of the design best practices and components are applied to the various one-language ballots (page 3.22) and various two-language ballots (page 3.50). The variations include two ballot styles: a one-color version and a Chinese-language version.

Electronic versions of these files are available at www.eac.gov, and specific instructions on how to use the electronic files are included on pages 3.22 and 3.50. The electronic files are available in two formats, one of which can be edited.

Election officials are encouraged to partner with their vendors and production partners to review the voluntary design recommendations in this document as early as possible.

Translations
The sample Chinese text in this section has been professionally translated, but translations do not reflect a specific elections expertise. The translated Spanish text has been edited to support election terminology recommended in the EAC's "Glossary of Key Election Terminology, English-Spanish, 2007."

Voter audience
This section details solutions for voters able to use printed ballots. Ballot instructions, labels, and navigation are written in simple language to support comprehension by voters at a third-grade reading level.

Optical scan specifications are based on information design principles, primary research findings, and accessibility requirements cited in 2005 Voluntary Voter System Guidelines (VVSG) section 3.2.

Areas of further study
System solutions for alternative input/output variations (combining tactile, audio, and visual toolsets) and solutions for large-print ballots.

Suggestions for best practices

The general election voter information prototypes shown on the following pages are based on VVSG, Americans with Disabilities Act (ADA) guidelines, research findings, and information design principles.

— Emphasize voter needs over administrative and vendor requirements.

— Use simple language for all content. Studies show that clear and concise writing is beneficial to voters of all literacy levels. Rewriting instructions, ballot instructions, and voter information materials using simple language increases usability and, on the voter's behalf, accuracy.

— Use one language per ballot, which is recommended practice. To meet usability standards, display no more than two languages simultaneously.

— Use upper- and lowercase sans serif type, set left aligned at the sizes outlined in the specifications, for readability. Avoid setting text in a centered alignment. Avoid setting text in all capital letters. Minimize the number of fonts used.

— Set at a minimum of 12 points all ballot content voters will read. Given a choice between adequate type size (12 points) and fewer pages, ballots with 12-point type and more pages were found to be more usable than those with fewer pages and smaller type.

— Use color functionally and consistently. Color can draw the reader's attention and emphasize important information. The use of color cannot be the sole means of conveying information or making distinctions. Another noncolor mode must complement color use, such as contrast, icon, text style, etc. (see VVSG).

— When clarifying instructions and processes, use accurate diagrams to describe voting technology and equipment.

— Use instructional icons only. Universally recognized icons such as arrows are acceptable and encouraged.

Research findings

Detailed findings that support ballot design best practices can be found in section 6 and section 7.

Planning process

The planning table on the following page outlines additional resources and steps that can be taken to ensure that ballot content and design best address voter needs.

These recommendations are based on best practices in use in Cook County, Illinois, and the pilot test in Nebraska.

Planning goals

These additional resources can help ensure that:

— Content is easily understood by voters, including those with low vision and literacy issues.

— The visual organization of the content supports ease of use and confidence in the process.

— Any necessary translations are accurate and sensitive to cultural differences in language and expression.

Planning value by role/resource

— S*imple-language expert* ensures that instructions and other ballot content are written in the most effective manner to help all voters (not just low-literacy voters) understand and follow instructions, and feel confident that they have properly cast their ballots.

— *Information designer* organizes the ballot content—text, graphics, illustrations—in a manner that is clear, simple, and functional, and that supports and enhances the voter's comprehension of the content and voting process. (Note: The design field is very broad; it is important to work with a designer who has expertise in the organization and presentation of complex information.)

— *Usability expert* works with the information designer to develop review, testing, and revision processes that improve the ballot's overall effectiveness, accuracy, and usability.

— *Translator* ensures proper grammatical, syntactic, and structural character of the content, and appropriate use of local dialect variations. Accurate translations are vital for non-English-speaking voters, and online translations are often misleading, unclear, or simply wrong (for Spanish translations, see EAC document "Glossary of Key Election Terminology, English-Spanish, 2007").

— *Cultural expert* reviews translated material to ensure that the translations are accurate and culturally relevant, and that their visual presentation is appropriate.

Production steps before election cycle		
Resources	*Planning, design, and usability activities*	*Tips*
1. Election Official	Use the current election to establish a baseline for future work. Get voter feedback before starting, not just afterward. Establish an approval process/team. Determine who must sign off on improvements at each phase.	
2. Election Official	Choose an objective, professional resource to take ownership of information design challenges. Simultaneously hire a designer and a usability professional who can offer additional feedback. Partner with a policy advisor who can help guide design improvements through the necessary legislative processes.	Whenever possible, hire a local person who will be able to meet with officials and the extended production team (vendors, printers, etc.). Provide the designer with poll worker training, as well as any feedback from voters or poll workers. Provide the designer with a complete list of current election documents and legal requirements.
3. Designer and Usability Expert	Review and become familiar with election design standards and recommendations. Understand variance between EAC best practices and local requirements for poll worker and voter materials.	
4. Election Official	Estimate value of design improvements. Gauge impact of the redesign process during the next election planning cycle.	

Resources during election cycle		
Resources	*Content development activities*	*Tips*
Simple-Language Expert	Edit final English-language content for low-literacy voters.	
Translator	Translate content for non-English-speaking voters.	Understand the translator's requirements before the election: data formats, time line, etc. Have a third-party expert review the translated materials after the initial draft. Legal advisors may need to review the materials after simple language and design have been incorporated.
Alternative Language/ Cultural Expert	Review translated content in each alternative language for cultural relevancy.	Translation services may not be aware of possible cultural sensitivities of translated material.
Designer	Election official provides designer with final content for different materials, in English and other languages, after they have been reviewed by simple language and cultural experts.	

Design: one language

On pages 3.7–3.21, design best practices for a general election one-language ballot are illustrated. Production specifications and discussion notes are provided—including typeface,* type size, leading, line weights, tint fills, and distances between elements.

The ballot content used in these samples was originally developed by the National Institute of Standards and Technology (NIST) to illustrate a "moderately complex" ballot. Although it is impossible to cover every ballot scenario, most general election ballot layout issues can be addressed using these designs.

Components

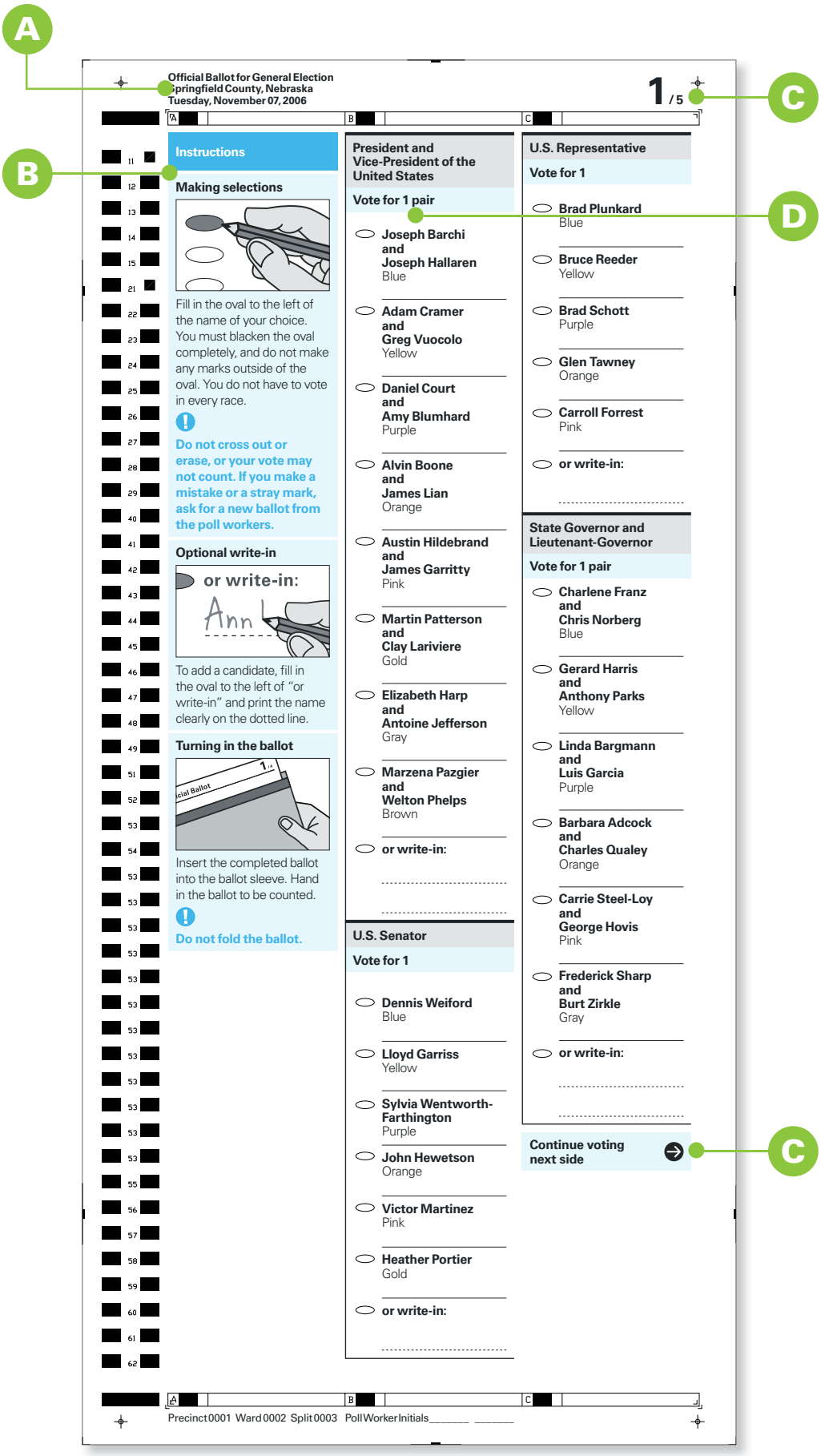
As illustrated on the following page, an optical scan ballot has four basic component content areas:

- Ⓐ Election information (e.g., jurisdiction, general election, and date)
- Ⓑ Ballot instructions
- Ⓒ Ballot navigation, including page numbers and reminders to vote on the other side or go on to the next page
- Ⓓ Questions, including contests, retentions, and ballot measures

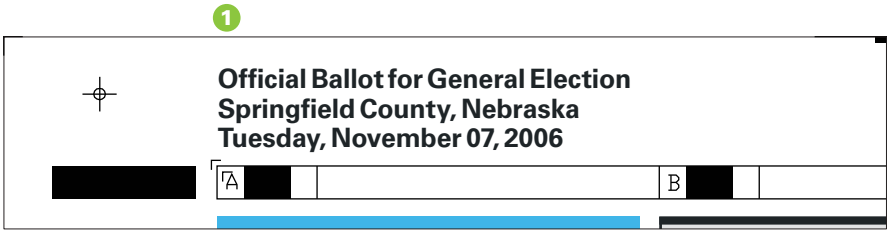
Each of these components is illustrated at its full size, and production specifications are included. Specifications are numbered from ❶ through ❻.

Designers can apply specifications in this section to other paper ballot formats, such as absentee, emergency, and primary election ballots.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.



50% actual size



100% actual size

Election information specifications

Information defining the specifics of the election should be placed above the left column of the face of every ballot page outside the area used by the voter and the scanner. Content should include the statement "Official Ballot" along with election type, location, and date. Local laws may require that additional information be included.

1 Information

On ballots with space constraints, election information may be set at a minimum size. For ballots with more available space, larger type is encouraged.

Minimum size type for all: Univers 65 Bold, size 10 pt., leading 11 pt., tracking -20, 100% black, left aligned.

Maximum size type for title: Univers 65 Bold, size 18 pt., leading 20 pt., tracking -20, 100% black, left aligned.

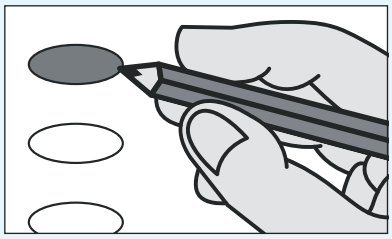
Maximum size type for location and date: Univers 65 Bold, size 12 pt., leading 14 pt., tracking -20, 100% black, left aligned.

Discussion

Though this is important content, it should not be set so large that it affects the amount of room for instructions and ballot content actually used by the voter.

1 **Instructions**

2 3 **Making selections**

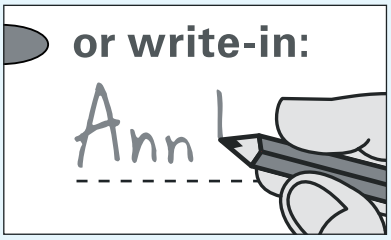


4 Fill in the oval to the left of the name of your choice.

5 You must blacken the oval completely, and do not make any marks outside of the oval. You do not have to vote in every race.

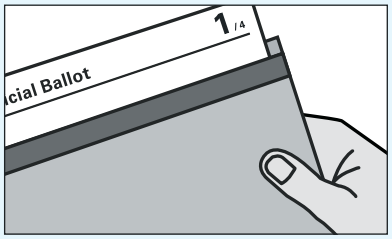
6 **Do not cross out or erase, or your vote may not count. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.**

Optional write-in



To add a candidate, fill in the oval to the left of "or write-in" and print the name clearly on the dotted line.

Turning in the ballot



Insert the completed ballot into the ballot sleeve. Hand in the ballot to be counted.

Do not fold the ballot.

all 100% actual size

Ballot instruction specifications

Specifications for each instruction element are referenced by number below.

1 Main head
This header defines the complete instructions area for the voter.

Fill: 100% process cyan, 0.5" height, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% white, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

2 Background fill
3 pt. white line between background tint and main head. 3 pt. white line between each instruction.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender of type, and 0.1" below lowest baseline of type for each instruction.

3 Subhead
Begins 0.1" below top of fill.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

4 Illustration
Begins 0.1" below lowest baseline of title.

Size: 0.1" inset from column width on both sides; height determined by most effective display of illustration (typically 1" to 2").

Stroke: 0.5 pt. line, 100% black.

5 Instruction text
Begins 0.1" below bottom of illustration.

Type: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

6 Alerts
These should be used only for critical instructions, such as actions that may invalidate a voter's ballot. Begins 0.1" below lowest baseline of instruction content.

Attention icon: 0.25" diameter, 100% process cyan, set 0.1" from left edge of fill.

Type: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% process cyan, left aligned, set 0.1" from left edge of fill and 0.1" below Attention icon.

Discussion

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

Illustrative diagrams that accurately reflect the ballot type and equipment further clarify instructions and processes.

These illustrations are available at www.eac.gov.

Informational icons are used to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

Embedding ballot instructions in ballots supports greater voting focus and autonomy for users, as does the use of simple language, numbered steps, and clear, specific illustrations.

Ballot instructions, running either vertically or horizontally, must be self-contained and separated from contest data. Vertical instruction treatments **cannot** share column space with contests—test voters often overlooked races located immediately beneath vertical instructions. Horizontal instructions running atop vertically placed contests in columns require the voter to read across (instructions) and then down-up (contests), which adds a slight learning challenge compared to an all-vertical layout.

2
3 **Continue voting next side** 4

Continue voting next page

Thank you for voting! Please turn in your finished ballot

all 100% actual size

Ballot navigation specifications

Specifications for each instruction element are referenced by number below.

1 Page numbering
Current and total page numbers should be placed in the top right corner of each face of every ballot page.

Current page type: Univers 65 Bold, size 36 pt., tracking -20, 100% black.

Total page type: Univers 65 Bold, size 12 pt., tracking -20, 100% black.

2 Instruction fill
Navigational instructions should be placed at the end of the final column on each ballot face, to tell the voter what to do next.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender of type, and 0.1" below lowest baseline of type.

3 Instruction content
Begins 0.1" below top of fill.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

4 Arrow
Use the Arrow icon to direct the voter to another location on the ballot.

Arrow icon: 0.25" diameter, 100% black, set 0.1" from right edge of fill, centered between top and bottom of fill.

Discussion

These ballot navigation guides help the voters through the ballot, telling them where they are in the process and where to go next.

Ballot pages should be numbered with large, bold numbers.

Informational icons such as arrows and exclamation points (next page) can be used to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

These informational icons are available at www.eac.gov.

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

1
2
3

U.S. Senator

Vote for 1

- ⬭ **Dennis Weiford**
  Blue
- ⬭ **Lloyd Garriss**
  Yellow
- ⬭ **Sylvia Wentworth-Farthington**
  Purple
- ⬭ **John Hewetson**
  Orange
- ⬭ **Victor Martinez**
  Pink
- ⬭ **Heather Portier**
  Gold
- ⬭ **or write-in:**

State Governor and Lieutenant-Governor

Vote for 1 pair

- ⬭ **Charlene Franz and Chris Norberg**
  Blue
- ⬭ **Gerard Harris and Anthony Parks**
  Yellow
- ⬭ **Linda Bargmann and Luis Garcia**
  Purple
- ⬭ **Barbara Adcock and Charles Qualey**
  Orange
- ⬭ **Carrie Steel-Loy and George Hovis**
  Pink
- ⬭ **Frederick Sharp and Burt Zirkle**
  Gray
- ⬭ **or write-in:**

Board of Education Member: City of Springfield

Vote for up to 5 4

- ⬭ **Alex Marr**
- ⬭ **Albert Musgrove**
- ⬭ **Thomas Fleming**
- ⬭ **Harriett Watson**
- ⬭ **Theodore Fina**
- ⬭ **Steven Williams**
- ⬭ **Peter Sigelakis**
- ⬭ **Deborah Barkelow**
- ⬭ **or write-in:**
- ⬭ **or write-in:**
- ⬭ **or write-in:**
- ⬭ **or write-in:**
- ⬭ **or write-in:**

all 100% actual size

Contest question specifications

Contest question components include borders that separate each contest, titles, special instructions, candidate/ticket information, and choices.

1 Border
This border defines the top, left, and bottom sides of the contest component.

Top line: 3.0 pt. line, 100% black, extends full width of the column.

Left line: 1.0 pt. line, 100% black.

Bottom line: 1.0 pt. line, 100% black, extends full width of the column; placed 0.1" below last content in column.

2 Contest title
This header defines each contest question; it begins directly below the top border.

Fill: 15% black, extends full width of the column, 0.1" above topmost ascender of type, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

3 Contest instructions
This area defines each contest's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender of type, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

4 Special instructions
When new or modified instructions are introduced, they should be called out to alert the voter. These are set identically to standard contest instructions, with the addition of an Attention icon.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Attention icon: 0.15" diameter, 100% process cyan, set 0.1" from left edge of fill, centered between top and bottom of fill.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of icon, centered between top and bottom of fill.

Discussion

Informational icons such as exclamation points and arrows are offered to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

These informational icons are available at www.eac.gov.

The use of political party icons is not encouraged, as literacy experts and design professionals believe they simply confuse many voters.

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

The phrase "Vote for 1 pair" is recommended best practice by simple language experts.

Specifications continue on next page

U.S. Senator

Vote for 1

5 ⬭ **Dennis Weiford**
Blue

6 ⬭ **Lloyd Garriss**
Yellow

⬭ **Sylvia Wentworth-Farthington**
Purple

⬭ **John Hewetson**
Orange

⬭ **Victor Martinez**
Pink

⬭ **Heather Portier**
Gold

7 ⬭ **or write-in:**

State Governor and Lieutenant-Governor

Vote for 1 pair

⬭ **Charlene Franz and Chris Norberg**
Blue

⬭ **Gerard Harris and Anthony Parks**
Yellow

⬭ **Linda Bargmann and Luis Garcia**
Purple

⬭ **Barbara Adcock and Charles Qualey**
Orange

⬭ **Carrie Steel-Loy and George Hovis**
Pink

⬭ **Frederick Sharp and Burt Zirkle**
Gray

⬭ **or write-in:**

Board of Education Member: City of Springfield

Vote for up to 5

⬭ **Alex Marr**

⬭ **Albert Musgrove**

⬭ **Thomas Fleming**

⬭ **Harriett Watson**

⬭ **Theodore Fina**

⬭ **Steven Williams**

⬭ **Peter Sigelakis**

⬭ **Deborah Barkelow**

⬭ **or write-in:**

⬭ **or write-in:**

⬭ **or write-in:**

⬭ **or write-in:**

⬭ **or write-in:**

all 100% actual size

Contest question specifications, *continued*

5 Candidate information
Candidate names section begins no less than 0.1" below bottom of instructions fill; on ballots with set selection locations, the distance may need to be greater. Subsequent names should begin 0.1" below separation line of previous candidate. Names should be set as close as possible to the selection location.

Name type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

Party type: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned. On contests with a two-person ticket, the word "and" should be placed alone on a separate line between the two candidate names.

6 Separation line
Each candidate option should be followed by a line, even if it is the final option in a particular contest. Line should be placed no less than 0.1" below the lowest baseline of candidate information; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.1" above topmost ascender of the following candidate name, if applicable.

Line: 0.25 pt. line, 100% black, extends full width of column area allowed for candidates.

7 Write-in
Begins 0.1" below final line of previous candidate. Write-in line should be placed no less than 0.3" below lowest baseline of type; on ballots with set selection locations, the distance may need to be greater.

On contests with a two-person ticket, a second write-in line should be added. Line should be placed no less than 0.3" below the first. Spacing before both lines should be equal.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

Write-in line: 0.5 pt. line, dashed 4 pt./4 pt., 100% black, extends full width of column area allowed for candidates.

Discussion

All candidates in any given contest should be given the same amount of vertical space. If one candidate's name must break onto a second line, the vertical space for all candidates should be changed to match.

Place the selection oval to the left of the candidate/ticket name as shown on page 3.16.

Judge Retention:
State Supreme Court

Vote yes or no

Keep **Elmer Hull** as Associate Justice of the State Supreme Court?

- ⬭ **Yes**
- ⬭ **No**

1

2 **Judge Retention:**
State Supreme Court

3 **Vote yes or no**

4 Keep **Susan Esquer** as Associate Justice of the State Court of Appeals, 5th Appellate District, Division 2?

5

6

- ⬭ **Yes**
- ⬭ **No**

Judge Retention:
State Supreme Court

Vote yes or no

Keep **Rita Zheng** as Associate Justice of State Family Court, 3rd District?

- ⬭ **Yes**
- ⬭ **No**

100% actual size

Retention question specifications

Retention question components include borders that separate each question, titles, special instructions, the question, and the choices.

1 Border
This border defines the top, left, and bottom sides of the question.

Top: 3.0 pt. line, 100% black, extends full width of the column.

Left: 1.0 pt. line, 100% black.

Bottom: 1.0 pt. line, 100% black, extends full width of the column; placed 0.1" below last content in column.

2 Retention title
This header defines each retention question; it begins directly below the top border.

Fill: 15% black, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

3 Retention instructions
This area defines each question's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

4 Retention content
Presents the question clearly to the voter. The judge's name should be bold to add emphasis. Begins no less than 0.1" below bottom of instructions fill.

Content type: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned.

Name type: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned.

5 Retention selection options
First selection option should begin 0.2" below lowest baseline of content; on ballots with set selection locations, the distance may need to be greater. Subsequent options should begin 0.1" below final line of previous option. Options should be set as close as possible to the selection location.

Option type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

6 Separation line
Each selection option should be followed by a line to clearly define it, even if it is the final option in a particular question. Line should be placed 0.1" below lowest baseline of selection option; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.1" above topmost ascender of the following option, if applicable.

Line: 0.25 pt. line, 100% black, extends full width of column area allowed for selection options.

Discussion

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

All names in any given retention question should be given the same amount of vertical space. If one candidate's name must break onto a second line, the vertical space for all candidates should be changed to match.

Place the selection oval to the left of the judge's name as shown on page 3.18.

1
2 **Ballot Measure 101: Open Primaries**

3 **Vote yes or no**

4 Requires primary elections where voters may vote for any state or federal candidate regardless of party registration of voter or candidate. The two primary-election candidates receiving most votes for an office, whether they are candidates with no party or members of same or different party, would be listed on general election ballot. Exempts presidential nominations. Fiscal Impact: No significant net fiscal effect on state and local governments.

5 ⬭ **Yes**

6 ⬭ **No**

Ballot Measure 106:
Limits on Private Enforcement of Unfair Business Competition Laws

Vote yes or no

Allows individual or class action "unfair business" lawsuits only if actual loss suffered; only government officials may enforce these laws on public's behalf. Fiscal Impact: Unknown state fiscal impact depending on whether the measure increases or decreases court workload and the extent to which diverted funds are replaced. Unknown potential costs to local governments, depending on the extent to which diverted funds are replaced.

⬭ **Yes**

⬭ **No**

100% actual size

Ballot measure specifications

Ballot measure components include borders that separate each question, titles, instructions, the question, and the choices.

1 Border
This border defines the top, left, and bottom sides of the question.

Top: 3.0 pt. line, 100% black, extends full width of the ballot measure area.

Left: 1.0 pt. line, 100% black.

Bottom: 1.0 pt. line, 100% black, extends full width of the ballot measure area; placed 0.1" below last content in ballot measure area.

2 Ballot measure title
This header defines each ballot measure question; it begins directly below the top border.

Fill: 15% black, extends full width of the ballot measure area, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

3 Ballot measure instructions
This area defines each question's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the ballot measure area, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill, centered between top and bottom of fill.

4 Ballot measure content
Presents the ballot measure question clearly to the voter; it begins no less than 0.1" below bottom of instructions fill, set 0.1" from left border. In a two-column ballot measure area, space for text should extend to 0.1" from the right edge of the ballot measure area. In a three-column ballot measure area, the space for text should extend no wider than 6".

Content type: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned.

5 Ballot measure selection options
First selection option should begin 0.2" below lowest baseline of content; on ballots with set selection locations, the distance may need to be greater. Subsequent options should begin 0.1" below final line of previous option. Options should be set as close as possible to the selection location, ideally in the left-most column of the ballot measure area.

Option type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

6 Separation line
Each selection option should be followed by a line to clearly define it, even if it is the final option in a particular question. Line should be placed 0.1" below lowest baseline of selection option; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.1" above topmost ascender of the following option, if applicable.

Line: 0.25 pt. line, 100% black, extends full width of ballot measure area allowed for selection options.

Discussion

A primary voter criticism of ballots is the length and complexity of ballot measure questions. It is imperative that these questions be written in the simplest language possible. Many jurisdictions also provide summaries.

The typesetting of the ballot measure text is critical. Too many or too few characters per line inhibit legibility and comprehension. The goal should be 40–60 characters per line. Research indicates that many users find line lengths of more than 60 characters or less than 20 characters hard to read.

There is a direct relationship between type size and line spacing (leading). Lines of type that are too close together inhibit legibility and comprehension (as do lines that are too far apart). Ballot measure content in these best practices are set at 12 points, with 2 points of leading.

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

Samples: one language

Optical scan ballot design best practices are applied to one-language variations on pages 3.23–3.33. The variations include two ballot styles, a one-color version and an Asian-language version.

Specifications that vary from those outlined previously are included. The samples illustrate the flexibility of the design best practices.

The sample Chinese text in this section has been professionally translated, but translations do not reflect a specific elections expertise.

Electronic files
The electronic files that were used to create these best practices are available at www.eac.gov.

They are provided in two formats: Acrobat (.pdf) and InDesign (.indd).*

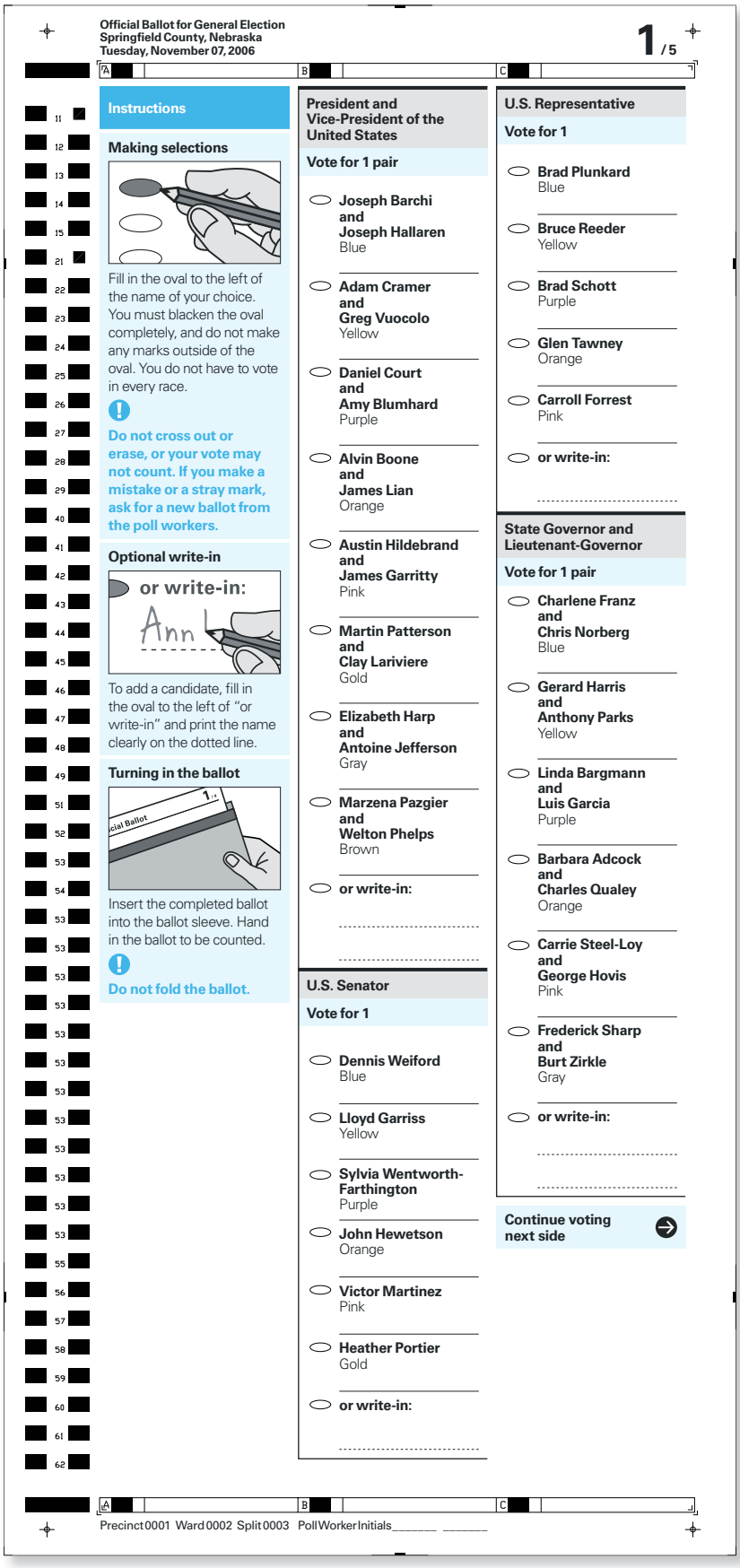
Each item has a unique identification number and file name. For example, the Acrobat file of the illustration on the next page is "OpScan_1L_VersionA.pdf."

How to work with the samples and electronic files
The Acrobat files can be printed on an office printer (depending on paper size), or by a local vendor with digital printing capabilities (printing firms and copy shops often have digital printing capabilities). Printed versions of these samples will serve as an important reference during the ballot design and production process.

InDesign files are template files that can be edited. The illustrative diagrams used in the InDesign files are also available at www.eac.gov. These files end with ".eps" and can also be edited. Access to Adobe InDesign page layout software and to software that can edit .eps files (e.g., Adobe Illustrator) is necessary. Working with a designer who has access to—and expertise in—these software programs is recommended.

Alternatively, these items can be recreated in other page layout programs using the production specifications provided on pages 3.6–3.21; the Acrobat .pdf files as a visual guide; and, if appropriate, the illustration files provided. Using nonlayout programs, such as those commonly used to write text-only documents, is not appropriate or recommended.

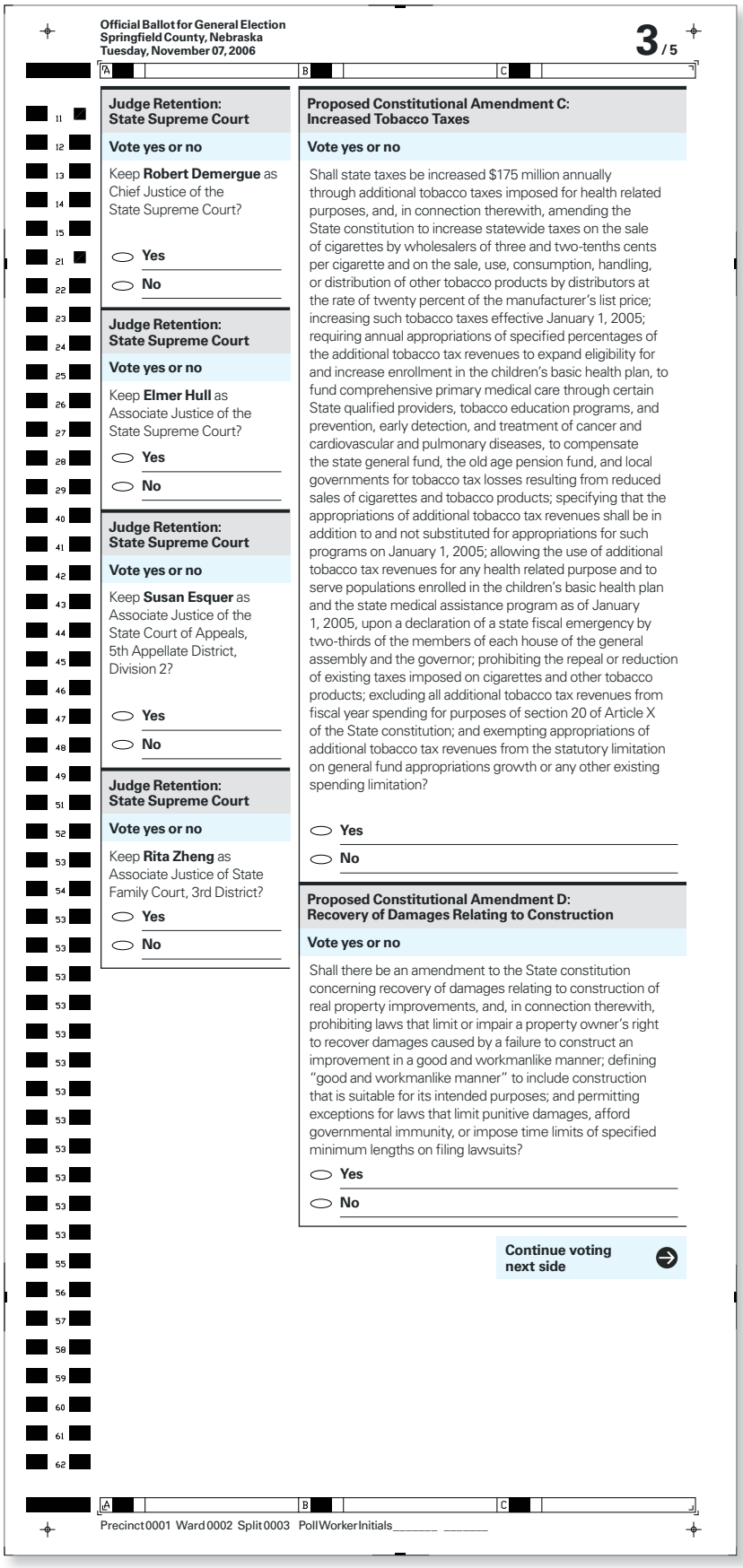
*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.



50% actual size

File name
OpScan_1L_VersionA

See pages 3.8–3.21 for detailed production specifications.



Official Ballot for General Election
Springfield County, Nebraska
Tuesday, November 07, 2006

3/5

Judge Retention: State Supreme Court

Vote yes or no

Keep **Robert Demergue** as Chief Justice of the State Supreme Court?

Yes
No

Judge Retention: State Supreme Court

Vote yes or no

Keep **Elmer Hull** as Associate Justice of the State Supreme Court?

Yes
No

Judge Retention: State Supreme Court

Vote yes or no

Keep **Susan Esquer** as Associate Justice of the State Court of Appeals, 5th Appellate District, Division 2?

Yes
No

Judge Retention: State Supreme Court

Vote yes or no

Keep **Rita Zheng** as Associate Justice of State Family Court, 3rd District?

Yes
No

Proposed Constitutional Amendment C: Increased Tobacco Taxes

Vote yes or no

Shall state taxes be increased $175 million annually through additional tobacco taxes imposed for health related purposes, and, in connection therewith, amending the State constitution to increase statewide taxes on the sale of cigarettes by wholesalers of three and two-tenths cents per cigarette and on the sale, use, consumption, handling, or distribution of other tobacco products by distributors at the rate of twenty percent of the manufacturer's list price; increasing such tobacco taxes effective January 1, 2005; requiring annual appropriations of specified percentages of the additional tobacco tax revenues to expand eligibility for and increase enrollment in the children's basic health plan, to fund comprehensive primary medical care through certain State qualified providers, tobacco education programs, and prevention, early detection, and treatment of cancer and cardiovascular and pulmonary diseases, to compensate the state general fund, the old age pension fund, and local governments for tobacco tax losses resulting from reduced sales of cigarettes and tobacco products; specifying that the appropriations of additional tobacco tax revenues shall be in addition to and not substituted for appropriations for such programs on January 1, 2005; allowing the use of additional tobacco tax revenues for any health related purpose and to serve populations enrolled in the children's basic health plan and the state medical assistance program as of January 1, 2005, upon a declaration of a state fiscal emergency by two-thirds of the members of each house of the general assembly and the governor; prohibiting the repeal or reduction of existing taxes imposed on cigarettes and other tobacco products; excluding all additional tobacco tax revenues from fiscal year spending for purposes of section 20 of Article X of the State constitution; and exempting appropriations of additional tobacco tax revenues from the statutory limitation on general fund appropriations growth or any other existing spending limitation?

Yes
No

Proposed Constitutional Amendment D: Recovery of Damages Relating to Construction

Vote yes or no

Shall there be an amendment to the State constitution concerning recovery of damages relating to construction of real property improvements, and, in connection therewith, prohibiting laws that limit or impair a property owner's right to recover damages caused by a failure to construct an improvement in a good and workmanlike manner; defining "good and workmanlike manner" to include construction that is suitable for its intended purposes; and permitting exceptions for laws that limit punitive damages, afford governmental immunity, or impose time limits of specified minimum lengths on filing lawsuits?

Yes
No

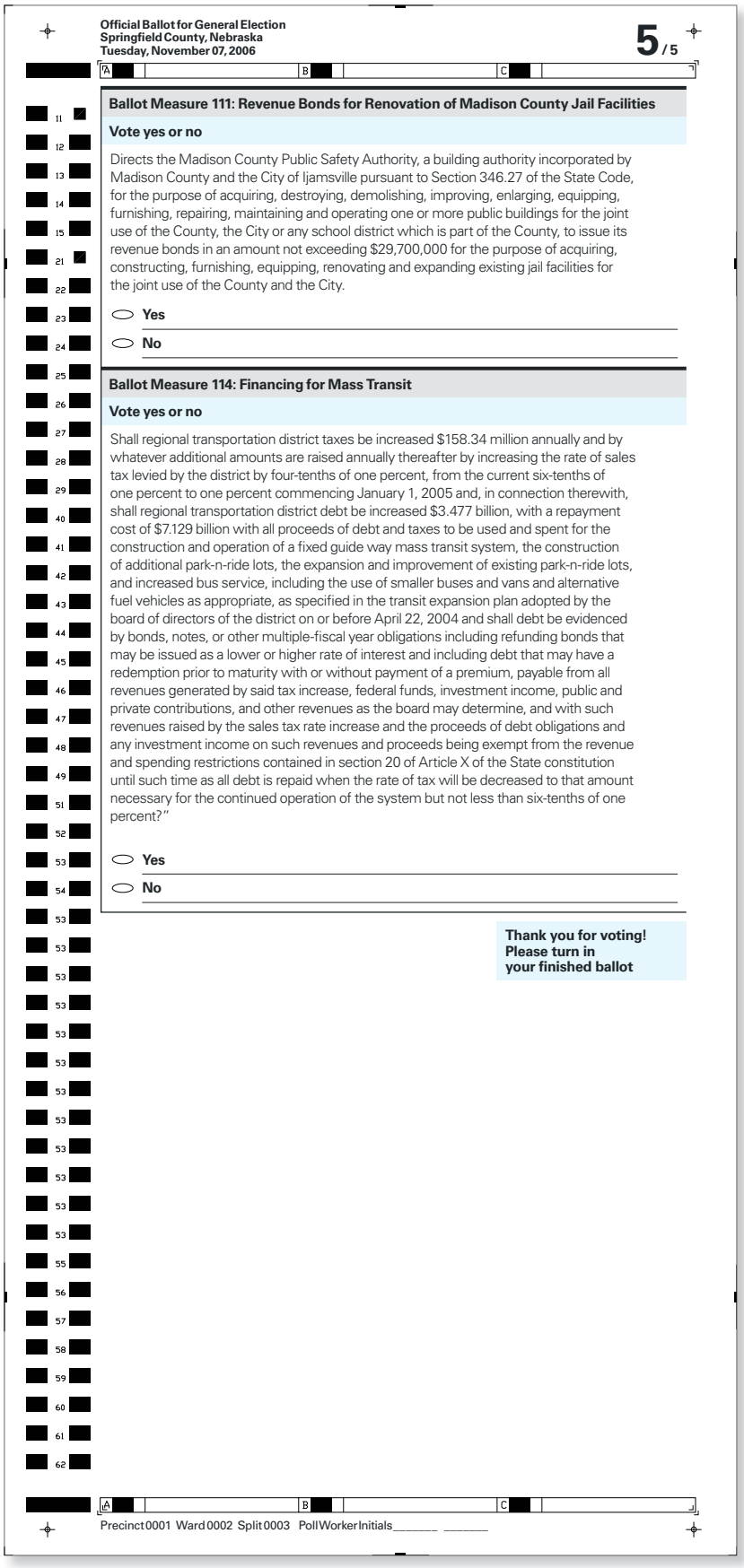
Continue voting next side

Precinct 0001 Ward 0002 Split 0003 Poll Worker Initials_____ _____

50% actual size

File name
OpScan_1L_VersionA

See pages 3.8–3.21 for detailed production specifications.



Official Ballot for General Election
Springfield County, Nebraska
Tuesday, November 07, 2006

5/5

A B C

Ballot Measure 111: Revenue Bonds for Renovation of Madison County Jail Facilities

Vote yes or no

Directs the Madison County Public Safety Authority, a building authority incorporated by Madison County and the City of Ijamsville pursuant to Section 346.27 of the State Code, for the purpose of acquiring, destroying, demolishing, improving, enlarging, equipping, furnishing, repairing, maintaining and operating one or more public buildings for the joint use of the County, the City or any school district which is part of the County, to issue its revenue bonds in an amount not exceeding $29,700,000 for the purpose of acquiring, constructing, furnishing, equipping, renovating and expanding existing jail facilities for the joint use of the County and the City.

⬭ **Yes**

⬭ **No**

Ballot Measure 114: Financing for Mass Transit

Vote yes or no

Shall regional transportation district taxes be increased $158.34 million annually and by whatever additional amounts are raised annually thereafter by increasing the rate of sales tax levied by the district by four-tenths of one percent, from the current six-tenths of one percent to one percent commencing January 1, 2005 and, in connection therewith, shall regional transportation district debt be increased $3.477 billion, with a repayment cost of $7.129 billion with all proceeds of debt and taxes to be used and spent for the construction and operation of a fixed guide way mass transit system, the construction of additional park-n-ride lots, the expansion and improvement of existing park-n-ride lots, and increased bus service, including the use of smaller buses and vans and alternative fuel vehicles as appropriate, as specified in the transit expansion plan adopted by the board of directors of the district on or before April 22, 2004 and shall debt be evidenced by bonds, notes, or other multiple-fiscal year obligations including refunding bonds that may be issued as a lower or higher rate of interest and including debt that may have a redemption prior to maturity with or without payment of a premium, payable from all revenues generated by said tax increase, federal funds, investment income, public and private contributions, and other revenues as the board may determine, and with such revenues raised by the sales tax rate increase and the proceeds of debt obligations and any investment income on such revenues and proceeds being exempt from the revenue and spending restrictions contained in section 20 of Article X of the State constitution until such time as all debt is repaid when the rate of tax will be decreased to that amount necessary for the continued operation of the system but not less than six-tenths of one percent?"

⬭ **Yes**

⬭ **No**

**Thank you for voting!
Please turn in
your finished ballot**

A B C

Precinct 0001 Ward 0002 Split 0003 Poll Worker Initials_____ _____

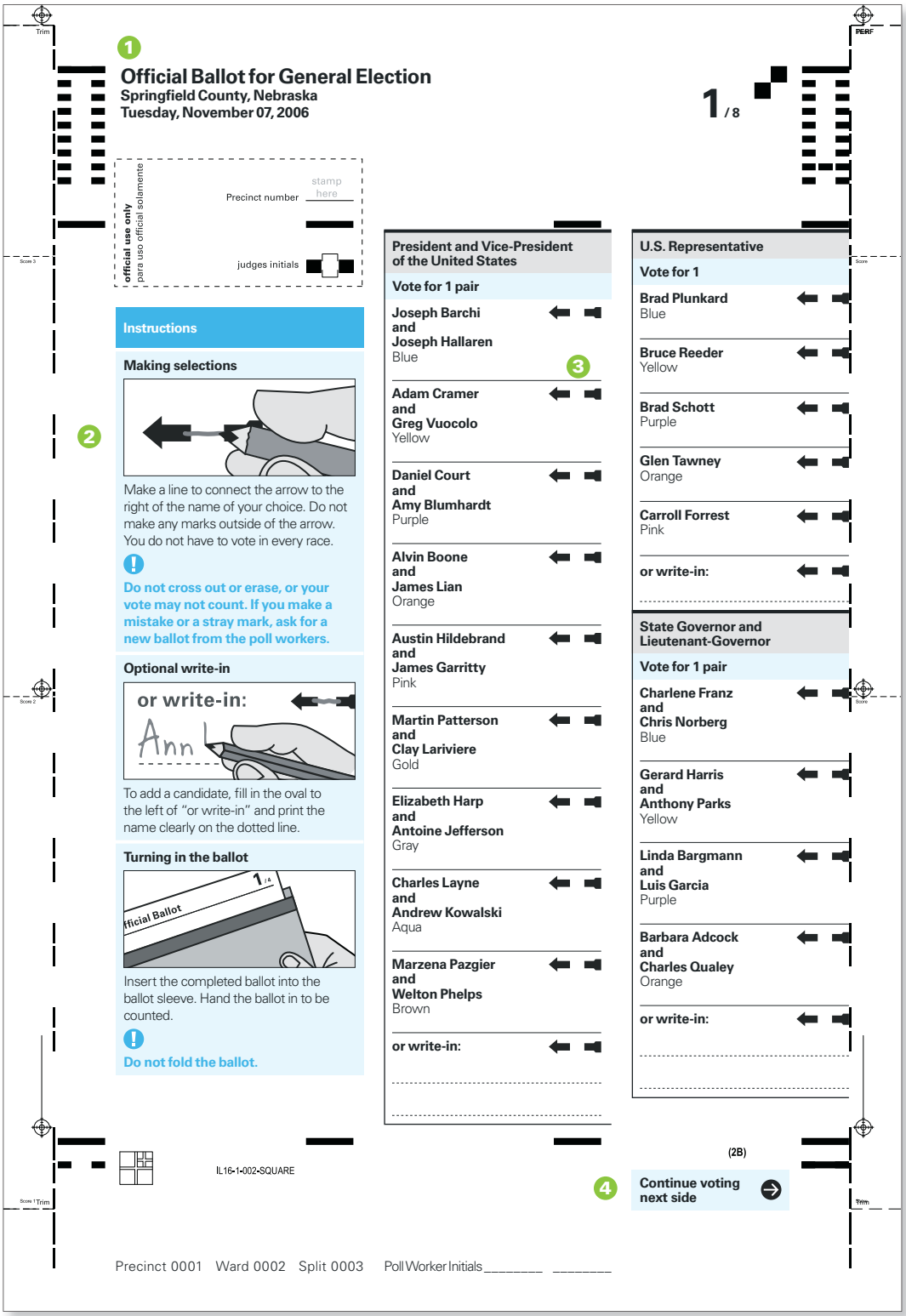
50% actual size

File name
OpScan_1L_VersionA

See pages 3.8–3.21 for detailed production specifications.

File name
OpScan_1L_VersionB

See pages 3.8–3.21 for additional production specifications.



50% actual size

Version B specifications

Alterations to the specifications noted on pages 3.8–3.21 are noted below.

1. **Election information**
   If space allows, the election information component may be made larger so the voter can easily identify it. See page 3.9 for more information on this component.

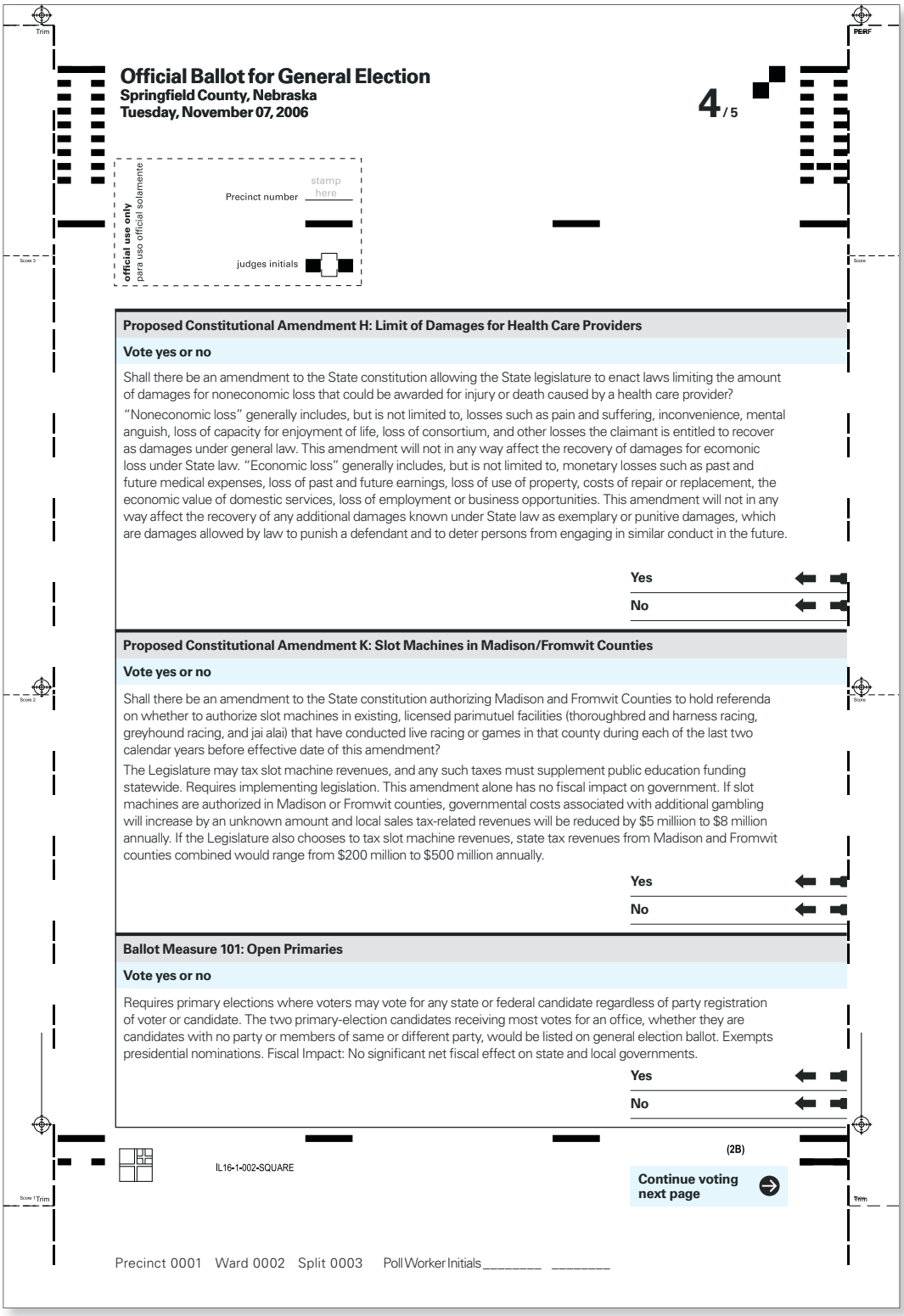
2. **Voting instructions**
   Both text and illustrations of the voting instructions should be developed to correspond precisely with the details of your particular ballot. See page 3.11 for more information about this component.

3. **Variations in selection method**
   On some ballot types, the selection location is to the right of the candidate's name. In these cases, place the selection options 0.1" from the left border of the column.

4. **Ballot navigation**
   In certain circumstances, navigation instructions may not be allowed in "active" or "live" areas of the ballot. In these cases, place the instructions as close to the bottom of the rightmost column as permitted.

File name
OpScan_1L_VersionB

See pages 3.8–3.21 for additional production specifications.

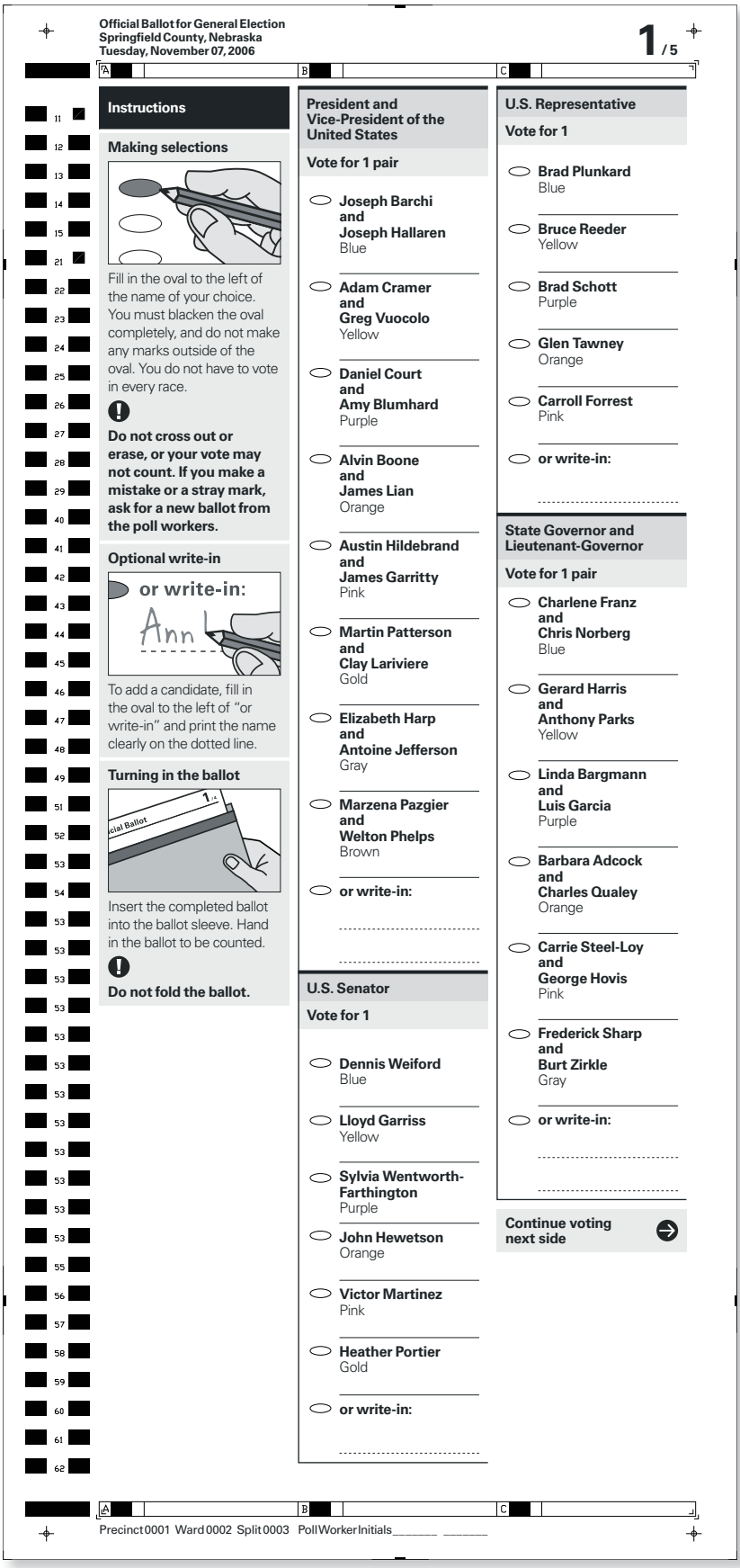


50% actual size

Version B specifications, *continued*

Alterations to the specifications on pages 3.8–3.21 are noted below.

1 **Ballot measure selection options**
On some ballot types, the selection options for multiple-column questions are placed only in the rightmost column of the ballot measure area. In these cases, the separation lines should extend only the width of that column. See page 3.11 for more information about this component.



50% actual size

File name
OpScan_1L_1Color

See pages 3.8–3.21 for additional production specifications.

One-color version specifications

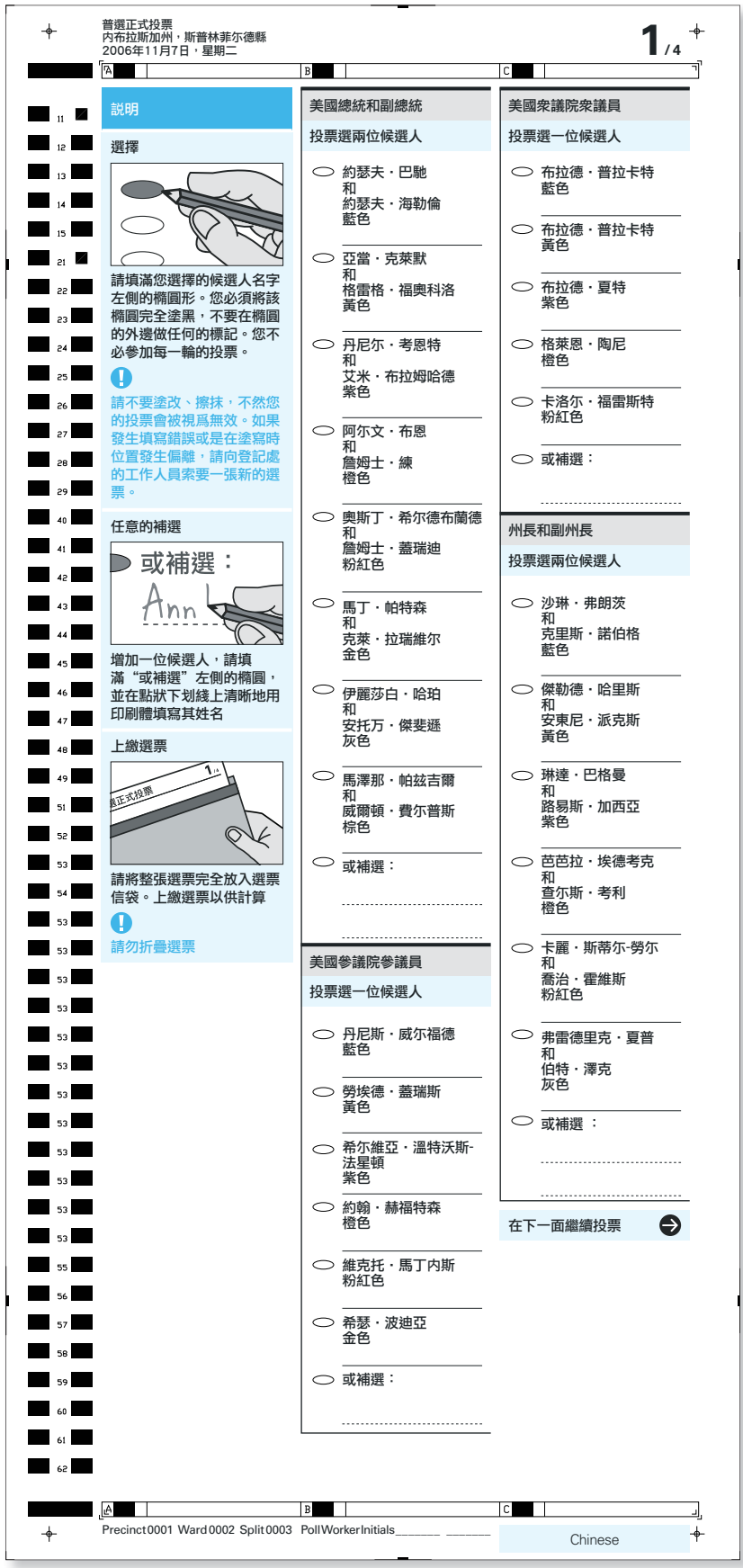
If circumstances dictate that ballots be printed in only one color, certain adjustments should be made to the specifications.

1. **Instruction title**
   Rather than process cyan, this title should be 100% black.

2. **Instructional fills**
   For all background fills, change from process cyan to 10% black. This includes the fills used with all ballot instructions, question instructions, and all navigational instructions.

3. **Attention icons**
   Rather than process cyan, all Attention icons should be 100% black. This includes icons for critical ballot instructions, as well as special question instructions.

4. **Question titles**
   To create appropriate contrast with question instructions, question title fills should be 20% black, rather than the 15% black used on two-color ballots.



50% actual size

File name
OpScan_1L_Asian

See pages 3.8–3.21 for additional production specifications.

Asian language versions

When single-language ballots are produced with Asian languages, the following areas need additional consideration:

1. **Typeface choices**
   Non-Western typefaces should be selected on the basis of simplicity, compatibility with the Univers type family, and cultural appropriateness. In the application shown, LeHei Pro is used for Chinese.

2. **Instructional illustrations**
   Make sure that instructional illustrations accurately reflect the language being used on the specific ballot.

3. **Candidate names**
   All ballot text should be translated, and candidate and political party names transliterated.

4. **Language indication**
   Though all poll workers are assumed to speak English, not all will be able to identify the language on a non-English ballot. Non-English ballots should include this block to identify the language. The block should be placed near the bottom right-hand corner of the ballot, as far from ballot content as possible.

   Fill: 10% process cyan, extends full width of one column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

   Type: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, center aligned, centered between top and bottom of fill.

Discussion

Translators ensure proper grammatical, syntactic, and structural character of the content and appropriate use of local dialect variations. Obviously, accurate translations are vital for non-English-speaking voters. Online translations are often misleading, unclear, or simply wrong. The EAC can provide some model translations.

A cultural expert can review translated material to ensure that the translations are accurate and culturally relevant, and that their visual presentation is appropriate.

Depending on State or local law, transliteration of candidate names into the appropriate Asian characters may or may not be required. When transliterating names, consultation with a language expert is recommended. Care should be taken to use the most standard characters, and make sure that overall there are neither overtly positive nor overtly negative meanings in the sound-based characters.

The sample shown on page 3.32 has the candidate names transliterated into Chinese.

Design: two languages

On pages 3.35–3.49, design best practices for a general election two-language ballot are illustrated. Production specifications and discussion notes are provided—including typeface,* type size, leading, line weights, tint fills, and distances between elements.

The ballot content used in these samples was originally developed by NIST to illustrate a "moderately complex" ballot. Although it is impossible to cover every ballot scenario, most general election ballot layout issues can be addressed using these designs.

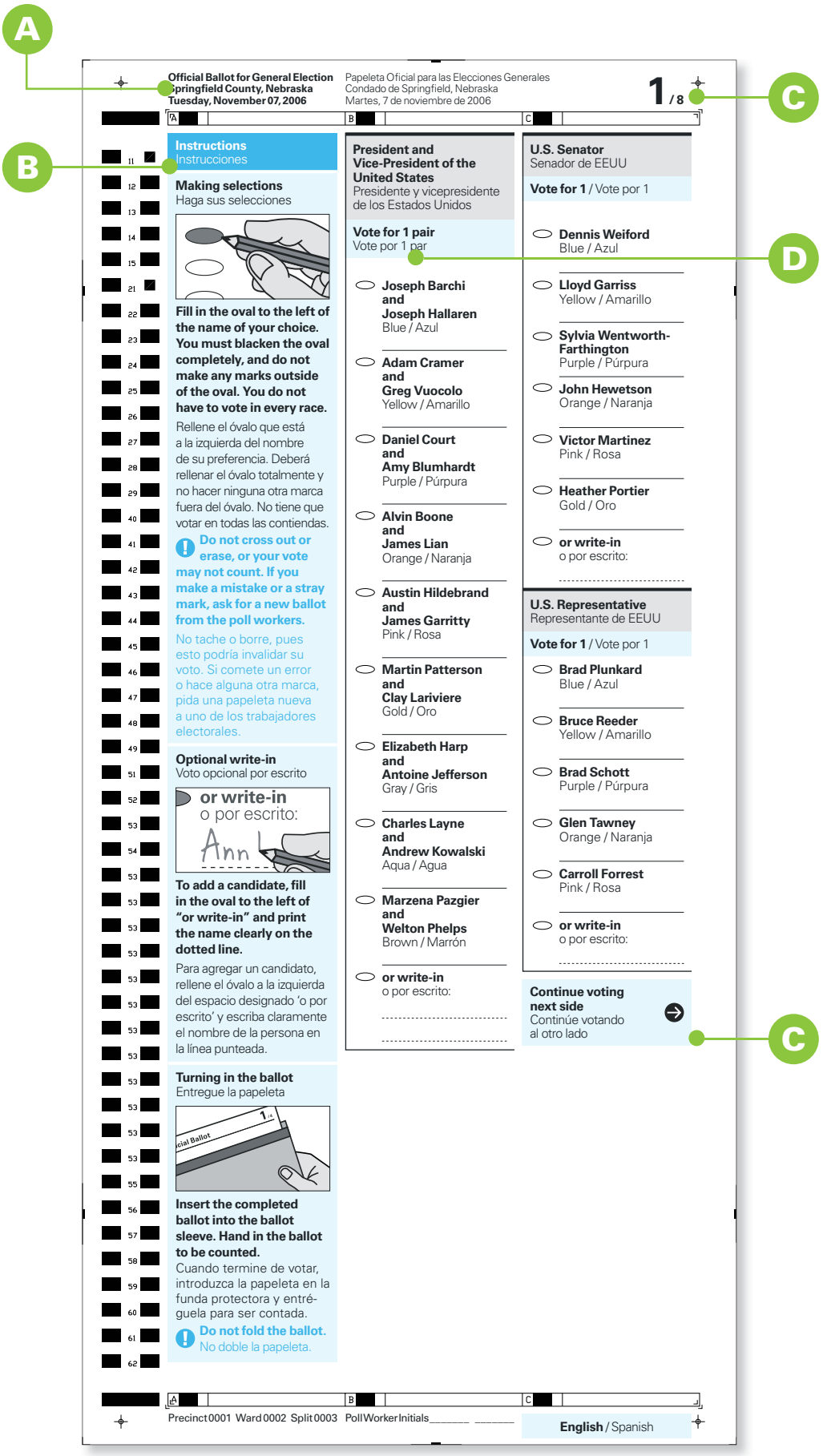
Components
As illustrated on the following page, an optical scan ballot has four basic component content areas:

- Ⓐ Election information (e.g., jurisdiction, general election, and date)
- Ⓑ Ballot instructions
- Ⓒ Ballot navigation, including page numbers and reminders to vote on the other side or go on to the next page
- Ⓓ Questions, including contests, retentions, and ballot measures

Each of these components is illustrated at its full size, and production specifications are included. Specifications are numbered from ❶ through ❻.

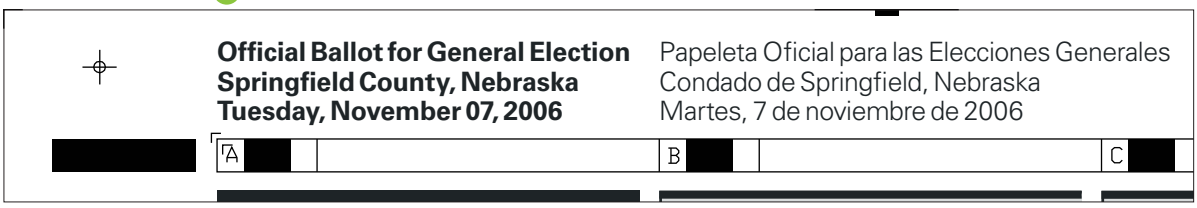
Designers can apply specifications in this section to other paper ballot formats, such as absentee, emergency, and primary election ballots.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.



50% actual size

1



100% actual size

Election information specifications

Information defining the specifics of the election should be placed above the left column of the face of every ballot page outside the area used by the voter and the scanner. Content should include the statement "Official Ballot," along with election type, location, and date. The second language should be to the right of the first, in line with the second column. Local laws may require that additional information be included.

1 Election information

On ballots with space constraints, election information may be set at a minimum size. For ballots with more available space, larger type is encouraged.

Minimum size type for all, Language One: Univers 65 Bold, size 10 pt., leading 11 pt., tracking -20, 100% black, left aligned.

Minimum size type for all, Language Two: Univers 45 Light, size 10 pt., leading 11 pt., tracking -20, 100% black, left aligned.

Maximum size type for title, Language One: Univers 65 Bold, size 18 pt., leading 20 pt., tracking -20, 100% black, left aligned.

Maximum size type for title, Language Two: Univers 45 Light, size 18 pt., leading 20 pt., tracking -20, 100% black, left aligned.

Maximum size type for location and date, Language One: Univers 65 Bold, size 12 pt., leading 14 pt., tracking -20, 100% black, left aligned.

Maximum size type for location and date, Language Two: Univers 45 Light, size 12 pt., leading 14 pt., tracking -20, 100% black, left aligned.

Language Two information should be set no less than 0.2" directly to the right of the longest Language One line of type.

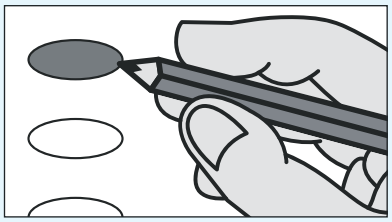
Discussion

Though this is important content, it should not be set so large that it affects the amount of room left for instructions and ballot content actually used by the voter.

1 **Instructions**
Instrucciones

2

Making selections
3 Haga sus selecciones



4

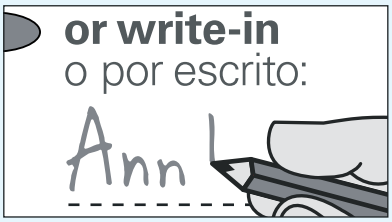
Fill in the oval to the left of the name of your choice. You must blacken the oval completely, and do not make any marks outside of the oval. You do not have to vote in every race.

5 Rellene el óvalo que está a la izquierda del nombre de su preferencia. Deberá rellenar el óvalo totalmente y no hacer ninguna otra marca fuera del óvalo. No tiene que votar en todas las contiendas.

Do not cross out or erase, or your vote may not count. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.

6 No tache o borre, pues esto podría invalidar su voto. Si comete un error o hace alguna otra marca, pida una papeleta nueva a uno de los trabajadores electorales.

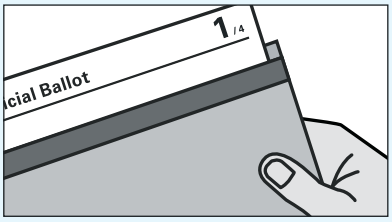
Optional write-in
Voto opcional por escrito



To add a candidate, fill in the oval to the left of "or write-in" and print the name clearly on the dotted line.

Para agregar un candidato, rellene el óvalo a la izquierda del espacio designado 'o por escrito' y escriba claramente el nombre de la persona en la línea punteada.

Turning in the ballot
Entregue la papeleta



Insert the completed ballot into the ballot sleeve. Hand in the ballot to be counted.

Cuando termine de votar, introduzca la papeleta en la funda protectora y entréguela para ser contada.

Do not fold the ballot.
No doble la papeleta.

all 100% actual size

Ballot instruction specifications

Specifications for each element in a section are referenced by number below.

1 Main head
This header defines the complete instructions area for the voter.

Fill: 100% process cyan, 0.5" height, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% white, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% white, left aligned, set 0.1" from left edge of fill.

Do not add additional space between languages. Type is centered between top and bottom of fill.

2 Background fill
3 pt. white line between background tint and main head. 3 pt. white line between each instruction.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender of type, and 0.1" below lowest baseline of type for each instruction.

3 Subhead
Begins 0.1" below top of fill.

Type, Language One: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Do not add additional space between languages.

4 Illustration
Begins 0.1" below lowest baseline of title.

Size: 0.1" inset from column width on both sides; height determined by most effective display of illustration (typically 1" to 2").

Stroke: 0.5 pt. line, 100% black.

5 Instruction text
Begins 0.1" below bottom of illustration.

Type, Language One: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Space between languages should be 0.1".

6 Alerts
These should be used only for critical instructions, such as actions that may invalidate a voter's ballot. Begins 0.1" below lowest baseline of instruction content.

Attention icon: 0.25" diameter, 100% process cyan, set 0.1" from left edge of fill.

Type, Language One: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% process cyan, left aligned, set 0.1" from left edge of fill and 0.1" below Attention icon.

Type, Language Two: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% process cyan, left aligned, set 0.1" from left edge of fill.

Space between languages should be 0.1".

Discussion

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Illustrative diagrams that accurately reflect the ballot type and equipment further clarify instructions and processes.

Informational icons are used to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

Embedding ballot instructions in ballots supports greater voting focus and autonomy for users, as does the use of simple language, numbered steps, and clear, specific illustrations. Ballot instructions, running either vertically or horizontally, must be self-contained and separated from contest data. Vertical instruction treatments **cannot** share column space with contests—test voters often overlooked races located immediately beneath vertical instructions. Horizontal instructions running atop vertically placed contests in columns require the voter to read across (instructions) and then down-up (contests), which adds a slight learning challenge compared to an all-vertical layout.

2 3 **Continue voting next side**
Continúe votando al otro lado 4

Continue voting next page
Continúe votando en la próxima página

Thank you for voting! Please turn in your finished ballot
¡Gracias por votar! Entregue su papeleta a un trabajador electoral

all 100% actual size

Ballot navigation specifications

Specifications for each instruction element are referenced by number below.

1 Page numbering

Current and total page numbers should be placed in the top right corner of each face of every ballot page.

Current page type: Univers 65 Bold, size 36 pt., tracking -20, 100% black.

Total page type: Univers 65 Bold, size 12 pt., tracking -20, 100% black.

2 Instruction fill

Navigational instructions should be placed at the end of the final column on each ballot face, to tell the voter what to do next.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender of type, and 0.1" below lowest baseline of type.

3 Instruction content

Begins 0.1" below top of fill.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Do not add additional space between languages. Type is centered between top and bottom of fill.

4 Arrow

Use the Arrow icon when directing the voter to another location on the ballot.

Arrow icon: 0.25" diameter, 100% black, set 0.1" from right edge of fill, centered between top and bottom of fill.

Discussion

These ballot navigation guides help move voters through the ballot, telling them where they are in the process and where to go next.

Ballot pages should be numbered with large, bold numbers to aid in ballot completion.

Informational icons such as arrows and exclamation points (next page) are offered to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

These informational icons are available at www.eac.gov.

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

1

U.S. Senator
Senador de EEUU

2

Vote for 1 / Vote por 1

3

- ⬭ **Dennis Weiford**
  Blue / Azul
- ⬭ **Lloyd Garriss**
  Yellow / Amarillo
- ⬭ **Sylvia Wentworth-Farthington**
  Purple / Púrpura
- ⬭ **John Hewetson**
  Orange / Naranja
- ⬭ **Victor Martinez**
  Pink / Rosa
- ⬭ **Heather Portier**
  Gold / Oro
- ⬭ **or write-in**
  o por escrito:
  _____

State Governor and Lieutenant-Governor
Gobernador y Vicegobernador

Vote for 1 pair
Vote por 1 par

- ⬭ **Charlene Franz and Chris Norberg**
  Blue / Azul
- ⬭ **Gerard Harris and Anthony Parks**
  Yellow / Amarillo
- ⬭ **Linda Bargmann and Luis Garcia**
  Purple / Púrpura
- ⬭ **Barbara Adcock and Charles Qualey**
  Orange / Naranja
- ⬭ **Carrie Steel-Loy and George Hovis**
  Pink / Rosa
- ⬭ **Frederick Sharp and Burt Zirkle**
  Gray / Gris
- ⬭ **or write-in**
  o por escrito:
  _____
  _____

Board of Education Member: City of Springfield
Miembro de la Comisión de Educación: Ciudad de Springfield

! **Vote for up to 5**
Vote por un máximo de 5

4

- ⬭ **Alex Marr**
- ⬭ **Albert Musgrove**
- ⬭ **Thomas Fleming**
- ⬭ **Harriett Watson**
- ⬭ **Theodore Fina**
- ⬭ **Steven Williams**
- ⬭ **Peter Sigelakis**
- ⬭ **Deborah Barkelow**
- ⬭ **or write-in**
  o por escrito:
  _____
- ⬭ **or write-in**
  o por escrito:
  _____
- ⬭ **or write-in**
  o por escrito:
  _____
- ⬭ **or write-in**
  o por escrito:
  _____
- ⬭ **or write-in**
  o por escrito:
  _____

all 100% actual size

Contest question specifications

Contest question components include borders that separate each contest, titles, special instructions, candidate/ticket information, and choices.

1 Border

This border defines the top, left, and bottom sides of the contest.

Top: 3.0 pt. line, 100% black, extends full width of the column.

Left: 1.0 pt. line, 100% black.

Bottom: 1.0 pt. line, 100% black, extends full width of the column; placed 0.1" below last content in column.

2 Contest title

This header defines each contest question; it begins directly below the top border.

Fill: 15% black, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Do not add additional space between languages. Type is centered between top and bottom of fill.

3 Contest instructions

This area defines each contest's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages. Type is centered between top and bottom of fill.

4 Special instructions

When new or modified instructions are introduced, they should be called out to alert the voter. These are set identically to standard contest instructions, with the addition of an Attention icon.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Attention icon: 0.15" diameter, 100% process cyan, set 0.1" from left edge of fill, centered between top and bottom of fill.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of icon.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of icon.

Do not add additional space between languages. Type is centered between top and bottom of fill.

Discussion

Informational icons such as exclamation points and arrows are offered to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

These informational icons are available at www.eac.gov.

The use of political party icons is not encouraged, because literacy experts and design professionals believe they simply confuse many voters.

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

Specifications continue on next page

U.S. Senator
Senador de EEUU

Vote for 1 / Vote por 1

5 ⬭ **Dennis Weiford**
Blue / Azul

6 ⬭ **Lloyd Garriss**
Yellow / Amarillo

⬭ **Sylvia Wentworth-Farthington**
Purple / Púrpura

⬭ **John Hewetson**
Orange / Naranja

⬭ **Victor Martinez**
Pink / Rosa

⬭ **Heather Portier**
Gold / Oro

⬭ **or write-in**
o por escrito:

7 _____

State Governor and Lieutenant-Governor
Gobernador y Vicegobernador

Vote for 1 pair
Vote por 1 par

⬭ **Charlene Franz and Chris Norberg**
Blue / Azul

⬭ **Gerard Harris and Anthony Parks**
Yellow / Amarillo

⬭ **Linda Bargmann and Luis Garcia**
Purple / Púrpura

⬭ **Barbara Adcock and Charles Qualey**
Orange / Naranja

⬭ **Carrie Steel-Loy and George Hovis**
Pink / Rosa

⬭ **Frederick Sharp and Burt Zirkle**
Gray / Gris

⬭ **or write-in**
o por escrito:

_____

_____

Board of Education Member: City of Springfield
Miembro de la Comisión de Educación: Ciudad de Springfield

Vote for up to 5
Vote por un máximo de 5

⬭ **Alex Marr**

⬭ **Albert Musgrove**

⬭ **Thomas Fleming**

⬭ **Harriett Watson**

⬭ **Theodore Fina**

⬭ **Steven Williams**

⬭ **Peter Sigelakis**

⬭ **Deborah Barkelow**

⬭ **or write-in**
o por escrito:

_____

⬭ **or write-in**
o por escrito:

_____

⬭ **or write-in**
o por escrito:

_____

⬭ **or write-in**
o por escrito:

_____

⬭ **or write-in**
o por escrito:

_____

all 100% actual size

Contest question specifications, *continued*

5 Candidate information
First name should begin no less than 0.1" below bottom of instructions fill; on ballots with set selection locations, the distance may need to be greater. Subsequent names should begin 0.1" below separation line of previous candidate. Names should be set as close as possible to the selection location. On contests with a two-person ticket, the word "and" should be placed alone on a separate line between the two candidate names.

Name type: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

Party type: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

6 Separation line
Each candidate option should be followed by a line to clearly define it, even if it is the final option in a particular contest. Line should be placed no less than 0.1" below the lowest baseline of candidate information; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.1" above topmost ascender of the following candidate name, if applicable.

Line: 0.25 pt. line, 100% black, extends full width of column area allowed for candidates.

7 Write-in
Begins 0.1" below final line of previous candidate. Write-in line should be placed no less than 0.3" below lowest baseline of type; on ballots with set selection locations, the distance may need to be greater.

On contests with a two-person ticket, a second write-in line should be added. Line should be placed no less than 0.3" below the first. Spacing before both lines should be equal.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned.

Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages.

Write-in line: 0.5 pt. line, dashed 4 pt./4 pt., 100% black, extends full width of column area allowed for candidates.

Discussion

All candidates in any given contest should be given the same amount of vertical space. If one candidate's name must break onto a second line, the vertical space for all candidates should be changed to match.

Place the selection oval to the left of the candidate/ticket name as shown on page 3.44.

1

Judge Retention:
State Supreme Court
Retención de Juez:
Tribunal Supremo del Estado

Vote yes or no
Vote sí o no

Keep Robert Demergue as Chief Justice of the State Supreme Court?

¿Se debe mantener a Robert Demergue como Presidente del Tribunal Supremo Estatal?

⬭ **Yes**
Sí

⬭ **No**
No

100% actual size

Retention question specifications

Retention question components include borders that separate each question, titles, special instructions, the question, and the choices.

1 Border
This border defines the top, left, and bottom sides of the question.

Top: 3.0 pt. line, 100% black, extends full width of the column.

Left: 1.0 pt. line, 100% black.

Bottom: 1.0 pt. line, 100% black, extends full width of the column; placed 0.1" below last content in column.

2 Retention title
This header defines each retention question; it begins directly below the top border.

Fill: 15% black, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Do not add additional space between languages. Type is centered between top and bottom of fill.

3 Retention instructions
This area defines each question's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages. Type is centered between top and bottom of fill.

4 Retention content
Presents the question clearly to the voter; it begins no less than 0.1" below bottom of instructions fill.

Type, Language One: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of column.

Type, Language Two: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of column.

Space between languages should be 0.1".

5 Retention selection options
First selection option should begin 0.2" below lowest baseline of content; on ballots with set selection locations, the distance may need to be greater. Subsequent options should begin 0.1" below final line of previous option. Options should be set as close as possible to the selection location.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages. Type is centered between top and bottom of fill.

6 Separation line
Each selection option should be followed by a line to clearly define it, even if it is the final option in a particular question. Line should be placed 0.1" below lowest baseline of selection option; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.1" above topmost ascender of the following option, if applicable.

Line: 0.25 pt. line, 100% black, extends full width of column area allowed for selection options.

Discussion

The decision to apply color only to instructions was confirmed by feedback from usability testing and literacy experts.

All names in any given retention question should be given the same amount of vertical space. If one candidate's name must break onto a second line, the vertical space for all candidates should be changed to match.

1
2 **Ballot Measure 101: Open Primaries**
Propuesta 101: Elecciones primarias abiertas

3 **Vote yes or no**
Vote sí o no

4 **Requires primary elections where voters may vote for any state or federal candidate regardless of party registration of voter or candidate. The two primary-election candidates receiving most votes for an office, whether they are candidates with no party or members of same or different party, would be listed on general election ballot. Exempts presidential nominations. Fiscal Impact: No significant net fiscal effect on state and local governments.**

Requiere de elecciones primarias en las que los electores pueden votar por cualquier candidato estatal o federal sin importar el partido en el que el elector o el candidato esté inscrito. Los candidatos de las elecciones primarias que reciban más votos para un cargo, sin importar si son candidatos sin partido o miembros de un mismo o de diferente partido, serán listados en la papeleta de la elección general. Excluye las nominaciones presidenciales. Impacto fiscal: no hay un efecto fiscal significativo en los gobiernos estatal y local.

5 ⬭ **Yes** / Sí

6 ⬭ **No** / No

100% actual size

Ballot measure specifications

Ballot measure question components include borders that separate each question, titles, instructions, the question, and the choices. Ballot measure should span either two or three columns, depending on available ballot space. This variable column width is noted below as the "ballot measure area."

1 Border
This border defines the top, left, and bottom sides of the question.

Top: 3.0 pt. line, 100% black, extends full width of the ballot measure area.

Left: 1.0 pt. line, 100% black.

Bottom: 1.0 pt. line, 100% black, extends full width of the ballot measure area; placed 0.1" below last content in ballot measure area.

2 Ballot measure title
This header defines each ballot measure question; it begins directly below the top border.

Fill: 15% black, extends full width of the ballot measure area, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Do not add additional space between languages. Type is centered between top and bottom of fill.

3 Ballot measure instructions
This area defines each question's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the ballot measure area, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of fill.

Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages. Type is centered between top and bottom of fill.

4 Ballot measure content
Presents the ballot measure question clearly to the voter; it begins no less than 0.1" below bottom of instructions fill, set 0.1" from left border. Ballot measure area should be divided into two equal columns separated by 0.5" with one language placed in each.

Type, Language One: Univers 65 Bold, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of column.

Type, Language Two: Univers 45 Light, size 12 pt., leading 15 pt., tracking -20, 100% black, left aligned.

5 Ballot measure selection options
First selection option should begin 0.2" below lowest baseline of content; on ballots with set selection locations, the distance may need to be greater. Subsequent options should begin 0.1" below final line of previous option. Options should be set as close as possible to the selection location, ideally in the leftmost column of the ballot measure area.

Option type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of ballot measure area.

Option type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, left aligned, set 0.1" from left edge of ballot measure area.

Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages. Type is centered between top and bottom of fill.

6 Separation line
Each selection option should be followed by a line to clearly define it, even if it is the final option in a particular question. Line should be placed 0.1" below lowest baseline of selection option; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.1" above topmost ascender of the following option, if applicable.

Line: 0.25 pt. line, 100% black, extends full width of ballot measure area allowed for selection options.

Discussion

See page 3.21.

Samples: two languages

Optical scan ballot design best practices are applied to two-language variations on pages 3.51–3.57. The variations include a one-color version and an Asian-language version.

Specifications that vary from those outlined previously are included. The samples illustrate the flexibility of the design best practices.

The sample Chinese text in this section has been professionally translated, but translations do not reflect a specific elections expertise. The translated Spanish text has been edited to support election terminology recommended in the EAC's "Glossary of Key Election Terminology, English-Spanish, 2007."

Electronic files
The electronic files that were used to create these best practices are available at www.eac.gov.

They are provided in two formats: Acrobat (.pdf) and InDesign (.indd).*

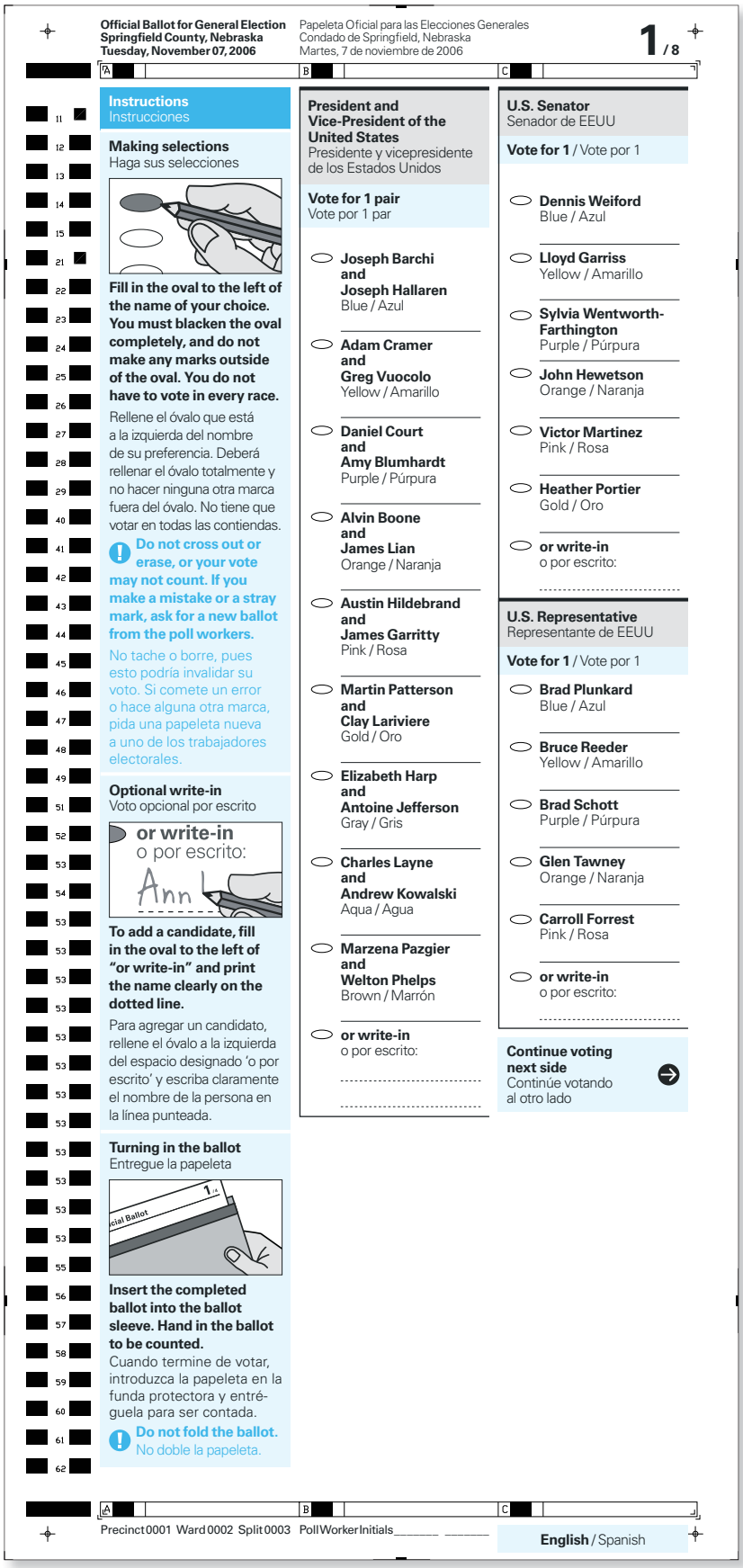
Each item has a unique identification number and file name. For example, the Acrobat file of the illustration on the next page is "OpScan_2L_VersionA.pdf."

How to work with the samples and electronic files
The Acrobat files can be printed on an office printer (depending on paper size), or by a local vendor with digital printing capabilities (printing firms and copy shops often have digital printing capabilities). Printed versions of these samples will serve as an important reference during the ballot design and production process.

InDesign files are template files that can be edited. The illustrative diagrams used in the InDesign files are also available at www.eac.gov. These files end with ".eps" and can also be edited. Access to Adobe InDesign page layout software and to software that can edit .eps files (e.g., Adobe Illustrator) is necessary. Working with a designer who has access to—and expertise in—these software programs is recommended.

Alternatively, these items can be recreated in other page layout programs using the production specifications provided on pages 3.6–3.21; the Acrobat .pdf files as a visual guide; and, if appropriate, the illustration files provided. Using nonlayout programs, such as those commonly used to write text-only documents, is not appropriate or recommended.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.



Official Ballot for General Election
Springfield County, Nebraska
Tuesday, November 07, 2006

Papeleta Oficial para las Elecciones Generales
Condado de Springfield, Nebraska
Martes, 7 de noviembre de 2006

1 / 8

Instructions
Instrucciones

Making selections
Haga sus selecciones

Fill in the oval to the left of the name of your choice. You must blacken the oval completely, and do not make any marks outside of the oval. You do not have to vote in every race.

Rellene el óvalo que está a la izquierda del nombre de su preferencia. Deberá rellenar el óvalo totalmente y no hacer ninguna otra marca fuera del óvalo. No tiene que votar en todas las contiendas.

Do not cross out or erase, or your vote may not count. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.

No tache o borre, pues esto podría invalidar su voto. Si comete un error o hace alguna otra marca, pida una papeleta nueva a uno de los trabajadores electorales.

Optional write-in
Voto opcional por escrito

To add a candidate, fill in the oval to the left of "or write-in" and print the name clearly on the dotted line.

Para agregar un candidato, rellene el óvalo a la izquierda del espacio designado 'o por escrito' y escriba claramente el nombre de la persona en la línea punteada.

Turning in the ballot
Entregue la papeleta

Insert the completed ballot into the ballot sleeve. Hand in the ballot to be counted.
Cuando termine de votar, introduzca la papeleta en la funda protectora y entréguela para ser contada.

Do not fold the ballot.
No doble la papeleta.

President and Vice-President of the United States
Presidente y vicepresidente de los Estados Unidos

Vote for 1 pair
Vote por 1 par

- **Joseph Barchi and Joseph Hallaren** — Blue / Azul
- **Adam Cramer and Greg Vuocolo** — Yellow / Amarillo
- **Daniel Court and Amy Blumhardt** — Purple / Púrpura
- **Alvin Boone and James Lian** — Orange / Naranja
- **Austin Hildebrand and James Garritty** — Pink / Rosa
- **Martin Patterson and Clay Lariviere** — Gold / Oro
- **Elizabeth Harp and Antoine Jefferson** — Gray / Gris
- **Charles Layne and Andrew Kowalski** — Aqua / Agua
- **Marzena Pazgier and Welton Phelps** — Brown / Marrón
- **or write-in** o por escrito:

U.S. Senator
Senador de EEUU

Vote for 1 / Vote por 1

- **Dennis Weiford** — Blue / Azul
- **Lloyd Garriss** — Yellow / Amarillo
- **Sylvia Wentworth-Farthington** — Purple / Púrpura
- **John Hewetson** — Orange / Naranja
- **Victor Martinez** — Pink / Rosa
- **Heather Portier** — Gold / Oro
- **or write-in** o por escrito:

U.S. Representative
Representante de EEUU

Vote for 1 / Vote por 1

- **Brad Plunkard** — Blue / Azul
- **Bruce Reeder** — Yellow / Amarillo
- **Brad Schott** — Purple / Púrpura
- **Glen Tawney** — Orange / Naranja
- **Carroll Forrest** — Pink / Rosa
- **or write-in** o por escrito:

Continue voting next side
Continúe votando al otro lado

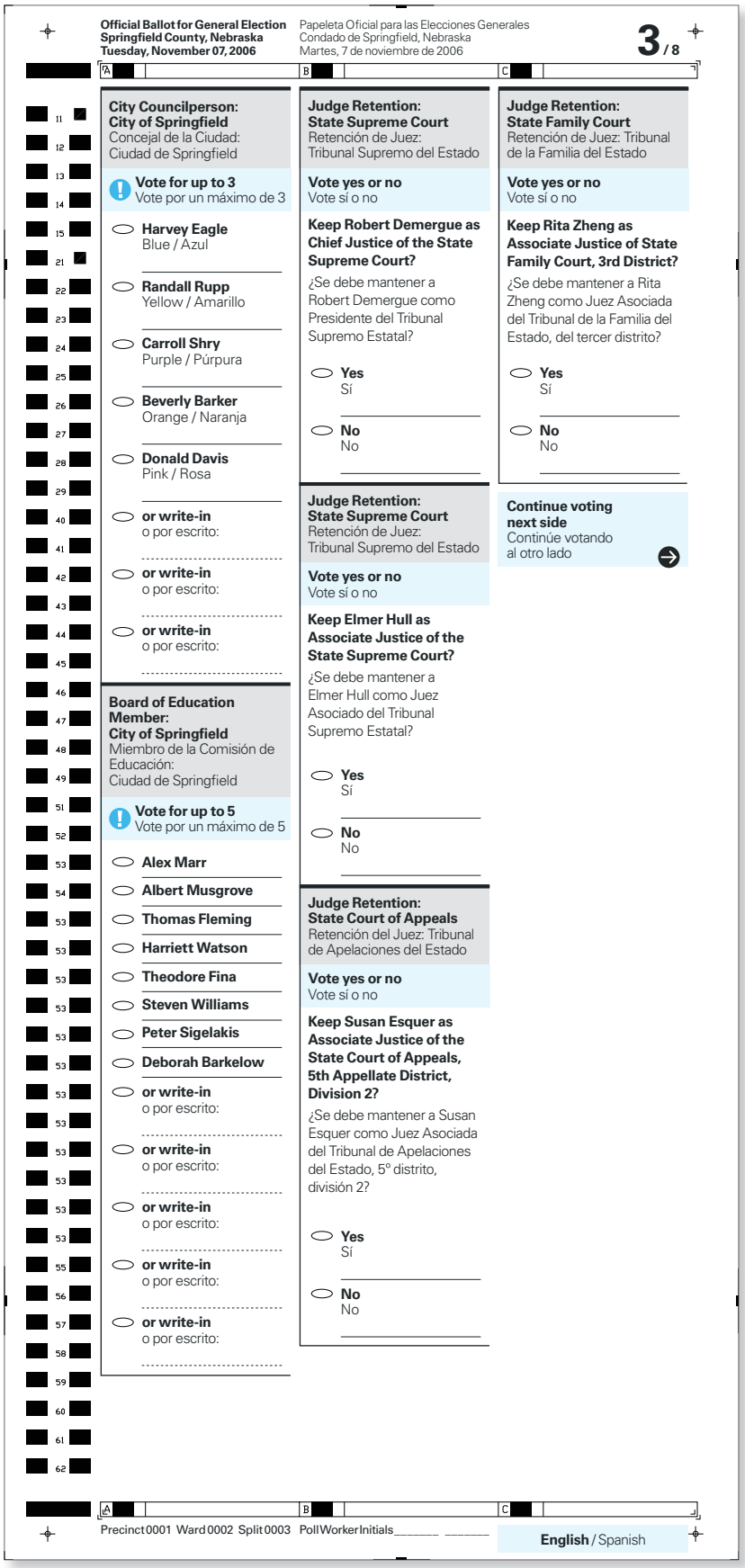
Precinct 0001 Ward 0002 Split 0003 Poll Worker Initials _____ _____

English / Spanish

50% actual size

File name
OpScan_2L_VersionA

See pages 3.36–3.49 for detailed production specifications.



Official Ballot for General Election
Springfield County, Nebraska
Tuesday, November 07, 2006

Papeleta Oficial para las Elecciones Generales
Condado de Springfield, Nebraska
Martes, 7 de noviembre de 2006

3 / 8

City Councilperson: City of Springfield
Concejal de la Ciudad: Ciudad de Springfield

Vote for up to 3
Vote por un máximo de 3

- **Harvey Eagle** Blue / Azul
- **Randall Rupp** Yellow / Amarillo
- **Carroll Shry** Purple / Púrpura
- **Beverly Barker** Orange / Naranja
- **Donald Davis** Pink / Rosa
- **or write-in** o por escrito:
- **or write-in** o por escrito:
- **or write-in** o por escrito:

Board of Education Member: City of Springfield
Miembro de la Comisión de Educación: Ciudad de Springfield

Vote for up to 5
Vote por un máximo de 5

- **Alex Marr**
- **Albert Musgrove**
- **Thomas Fleming**
- **Harriett Watson**
- **Theodore Fina**
- **Steven Williams**
- **Peter Sigelakis**
- **Deborah Barkelow**
- **or write-in** o por escrito:
- **or write-in** o por escrito:
- **or write-in** o por escrito:
- **or write-in** o por escrito:
- **or write-in** o por escrito:

Judge Retention: State Supreme Court
Retención de Juez: Tribunal Supremo del Estado

Vote yes or no
Vote sí o no

Keep Robert Demergue as Chief Justice of the State Supreme Court?
¿Se debe mantener a Robert Demergue como Presidente del Tribunal Supremo Estatal?

- **Yes** Sí
- **No** No

Judge Retention: State Supreme Court
Retención de Juez: Tribunal Supremo del Estado

Vote yes or no
Vote sí o no

Keep Elmer Hull as Associate Justice of the State Supreme Court?
¿Se debe mantener a Elmer Hull como Juez Asociado del Tribunal Supremo Estatal?

- **Yes** Sí
- **No** No

Judge Retention: State Court of Appeals
Retención del Juez: Tribunal de Apelaciones del Estado

Vote yes or no
Vote sí o no

Keep Susan Esquer as Associate Justice of the State Court of Appeals, 5th Appellate District, Division 2?
¿Se debe mantener a Susan Esquer como Juez Asociada del Tribunal de Apelaciones del Estado, 5º distrito, división 2?

- **Yes** Sí
- **No** No

Judge Retention: State Family Court
Retención de Juez: Tribunal de la Familia del Estado

Vote yes or no
Vote sí o no

Keep Rita Zheng as Associate Justice of State Family Court, 3rd District?
¿Se debe mantener a Rita Zheng como Juez Asociada del Tribunal de la Familia del Estado, del tercer distrito?

- **Yes** Sí
- **No** No

Continue voting next side
Continúe votando al otro lado

Precinct 0001 Ward 0002 Split 0003 Poll Worker Initials _____ _____

English / Spanish

50% actual size

File name
OpScan_2L_VersionA

See pages 3.36–3.49 for detailed production specifications.

Official Ballot for General Election
Springfield County, Nebraska
Tuesday, November 07, 2006

Papeleta Oficial para las Elecciones Generales
Condado de Springfield, Nebraska
Martes, 7 de noviembre de 2006

8 / 8

Ballot Measure 113: Financing for Mass Transit
Propuesta 113: Financiamiento del sistema de transporte público

Vote yes or no
Vote sí o no

Shall regional transportation district taxes be increased $158.34 million annually and by whatever additional amounts are raised annually thereafter by increasing the rate of sales tax levied by the district by four-tenths of one percent, from the current six-tenths of one percent to one percent commencing January 1, 2005 and, in connection therewith, shall regional transportation district debt be increased $3.477 billion, with a repayment cost of $7.129 billion with all proceeds of debt and taxes to be used and spent for the construction and operation of a fixed guide way mass transit system, the construction of additional park-n-ride lots, the expansion and improvement of existing park-n-ride lots, and increased bus service, including the use of smaller buses and vans and alternative fuel vehicles as appropriate, as specified in the transit expansion plan adopted by the board of directors of the district on or before April 22, 2004 and shall debt be evidenced by bonds, notes, or other multiple-fiscal year obligations including refunding bonds that may be issued as a lower or higher rate of interest and including debt that may have a redemption prior to maturity with or without payment of a premium, payable from all revenues generated by said tax increase, federal funds, investment income, public and private contributions, and other revenues as the board may determine, and with such revenues raised by the sales tax rate increase and the proceeds of debt obligations and any investment income on such revenues and proceeds being exempt from the revenue and spending restrictions contained in section 20 of Article X of the State constitution until such time as all debt is repaid when the rate of tax will be decreased to that amount necessary for the continued operation of the system but not less than six-tenths of one percent?"

¿Se deben incrementar los impuestos distritales al transporte en $154.34 millones de dólares al año y en las cantidades adicionales que se recauden anualmente a partir de este momento, incrementando la tasa del impuesto sobre las ventas recaudada por el distrito en cuatro décimos del uno por ciento, d los actuales seis décimos del uno por ciento a uno por ciento a partir del 1 de enero de 2005 y, en relación con el mismo, se debe incrementar la deuda del distrito regional de transporte en $3,477 millones de dólares, con un costo de repago de $7,129 millones de dólares en donde todos los ingresos de la deuda y los impuestos se pueden usar y gastar para la construcción y operación de un sistema de transporte masivo de vía fija, la construcción de lotes adicionales de estacionamiento "park-n-ride", la expansión y mejora de los lotes de estacionamiento "park-n-ride" existentes y aumentar el servicio de autobuses, incluyendo el uso de autobuses más pequeños y camionetas y vehículos de combustible alternativo según convenga, según lo especificado en el plan de expansión del transporte adoptado por el consejo de administración del distrito en o antes del 22 de abril del 2004 y si la deuda debe evidenciarse en bonos, notas u otras obligaciones para múltiples años fiscales incluyendo el refinanciamiento de los bonos que pueden emitirse a una tasa de interés menor o mayor e incluyendo la deuda que pudiera surgir por la liquidación antes del vencimiento con o sin pago de una prima, pagadera por todos los ingresos generados por dicho incremento fiscal, fondos federales, ingreso por inversiones, contribuciones públicas y privadas, y otros ingresos que pudiera determinar el consejo, y con los ingresos recaudados por el incremento en la tasa impositiva sobre las ventas y los ingresos de las obligaciones de deuda y cualquier ingreso por inversiones sobre dichos ingresos y ganancias que estén exentas de las restricciones de ingresos y gastos contenidas en la Sección 20 del Artículo X de la constitución estatal hasta el momento en que toda la deuda sea pagada cuando la tasa impositiva sea incrementada a la cantidad necesaria para la operación continua del sistema pero no menor a los seis décimos del uno por ciento?"

⬭ **Yes** / Sí

⬭ **No** / No

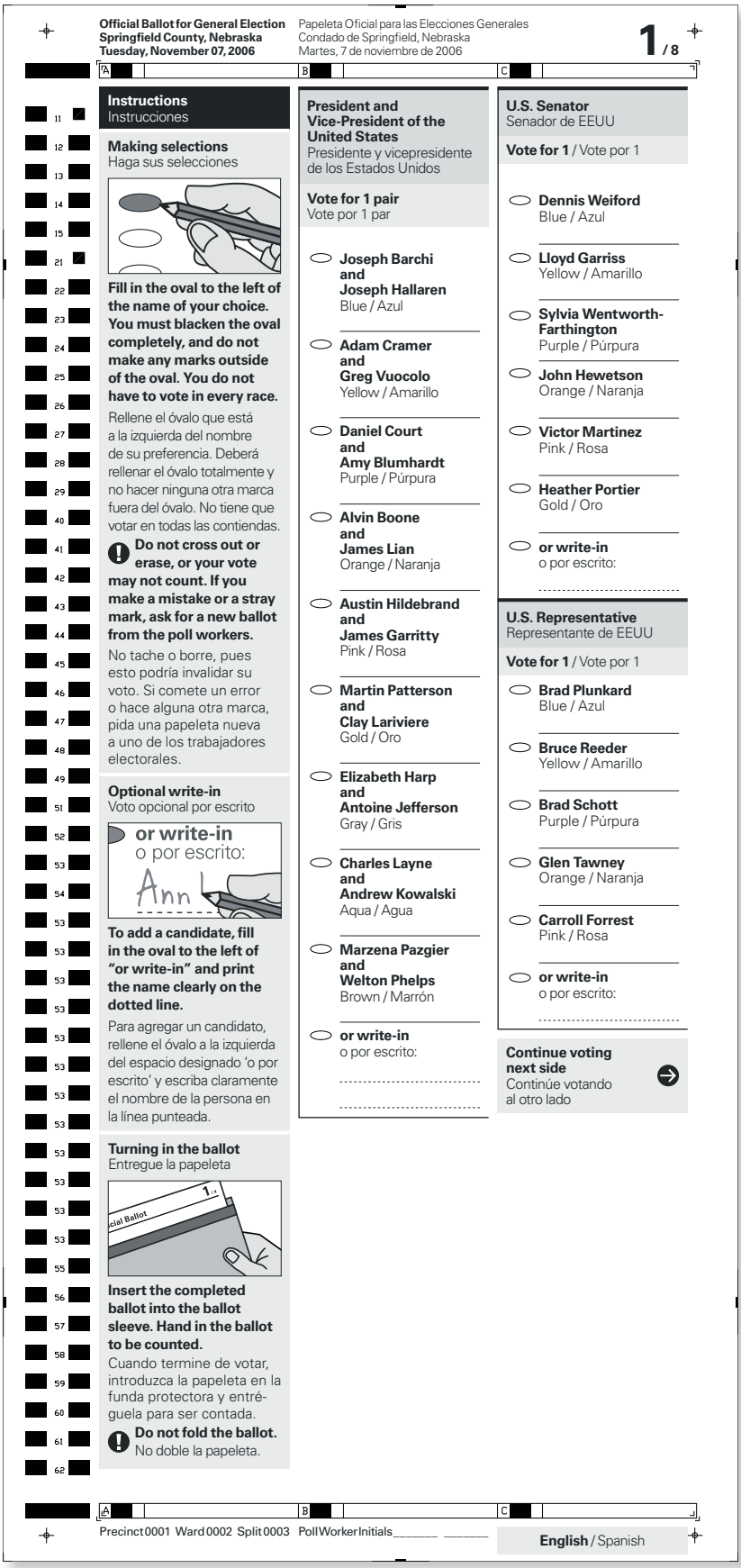
Thank you for voting!
Please turn in your finished ballot
¡Gracias por votar!
Entregue su papeleta a un trabajador electoral

English / Spanish

50% actual size

File name
OpScan_2L_VersionA

See pages 3.36–3.49 for detailed production specifications.



50% actual size

File name
OpScan_2L_1Color

See pages 3.36–3.49 for detailed production specifications.

One-color version specifications

If circumstances dictate that ballots be printed in only one color, certain adjustments should be made to the specifications of the ballot.

1. **Instruction head**
   Rather than process cyan, this header should be 100% black.

2. **Instructional fills**
   Rather than screened process cyan, all instructional fills should be 10% black. This includes the fills used with all ballot instructions, question instructions, and all navigational instructions.

3. **Attention icons**
   Rather than process cyan, all Attention icons should be 100% black. This includes icons for critical ballot instructions, as well as special question instructions.

4. **Question titles**
   To create appropriate contrast with question instructions, question header fills should be 20% black, rather than the 15% black used on two-color ballots.

50% actual size

File name
OpScan_2L_Asian

See pages 3.36–3.49 for detailed production specifications.

Asian language versions

When dual-language ballots are produced for non-English languages, certain situations should be considered.

1. **Typeface choices**
   Non-Western typefaces should be selected on the basis of simplicity, compatibility with the Univers type family, and cultural appropriateness. In the application shown, LeHei Pro is used for Chinese.

2. **Instructional illustrations**
   Make sure that instructional illustrations accurately reflect the language being used on the specific ballot.

3. **Candidate names**
   All ballot text should be translated, and candidate and political party names transliterated.

4. **Language indication**
   Although it is assumed that all poll workers will speak English, not all will be able to identify the language on a non-English ballot. Non-English ballots should include this block to identify the language. The block should be placed near the bottom right-hand corner of the ballot, as far from ballot content as possible.

   Fill: 10% process cyan, extends full width of one column, 0.1" above topmost ascender, and 0.1" below lowest baseline of type.

   Type, Language One: Univers 65 Bold, size 12 pt., leading 13 pt., tracking -20, 100% black, center aligned.

   Type, Language Two: Univers 45 Light, size 12 pt., leading 13 pt., tracking -20, 100% black, center aligned.

   Use a forward slash to separate languages if both fit on a single line. If they are on separate lines, do not add additional space between languages. Type is centered between top and bottom of fill.

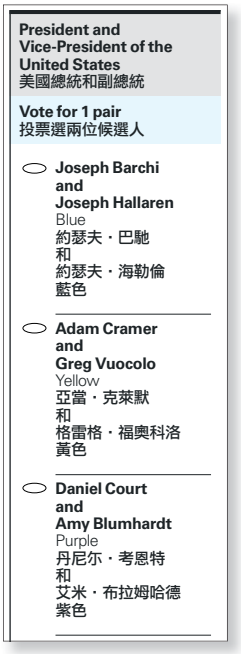
Discussion

Translators ensure proper grammatical, syntactic, and structural character of the content and appropriate use of local dialect variations. Obviously, accurate translations are vital for non-English-speaking voters. Online translations are often misleading, unclear, or simply wrong.

A cultural expert can review translated material to ensure that the translations are accurate and culturally relevant, and that their visual presentation is appropriate.

Depending on State or local legislation, transliteration of candidate names into the appropriate Asian characters may or may not be required. When transliterating names, consultation with a language expert is recommended. Care should be taken to use the most standard characters, and make sure that overall there are neither overtly positive nor overtly negative meanings in the sound-based characters.

The sample shown on page 3.56 does not have candidate names transliterated into Chinese. The sample below shows the recommended structure of a contest on a two-language ballot containing both English and transliterated Asian candidate names.



Effective Designs for the Administration of Federal Elections

Section 4: Full-face DRE ballots

June 2007

U.S. Election Assistance Commission

Full-face direct-recording electronic (DRE) ballots

This section has three parts: (1) planning process information; (2) one-language full-face DRE ballot design best practices; and (3) additional samples.

Planning
The Planning section (pages 4.4–4.5) outlines how to incorporate resources into your ballot development and production process; in what areas those resources may be of assistance; and when those activities should occur. It also offers tips on possible challenges and opportunities. These suggestions apply to both one-language and two-language ballots.

Design
Best practice samples are illustrated in full and by component. These samples and components are accompanied by production specifications and discussion notes.

Samples
Additional best practice samples, including a one-color version, appear on pages 4.23–4.25.

Electronic versions of these files are available at www.eac.gov, and specific instructions on how to use the electronic files are included on page 4.22. The electronic files are available in two formats, one of which can be edited.

Election officials are encouraged to partner with their vendors and production partners to review the voluntary design recommendations in this document as early as possible.

Voter audience
This section details interface solutions for voters able to interact with a full-face DRE touch screen input. Ballot instructions, labels, and navigation, written in simple language, support comprehension by voters at a third-grade reading level.

Full-face DRE specifications are based on information design principles, optical scan primary research findings, and accessibility requirements cited in 2005 Voluntary Voter System Guidelines (VVSG) section 3.2.

Areas of further study
System solutions for alternative input/output variations (combining tactile, audio, and visual toolsets).

Suggestions for best practices

The general election voter information prototypes shown on the following pages are based on VVSG, Americans with Disabilities Act guidelines (ADA), research findings, and information design principles.

— Emphasize voter needs over administrative and vendor requirements.

— Use simple language for all content. Studies show that clear and concise writing is beneficial to voters at all literacy levels. Rewriting instructions ballot instructions and voter information materials using simple language increases usability and, on the voter's behalf, accuracy.

— Use one language per ballot, which is recommended practice. To meet usability standards, display no more than two languages simultaneously.

— Use upper- and lowercase sans serif type, set left aligned at the sizes outlined in the specifications, for readability. Avoid setting text in a centered alignment. Avoid setting text in all capital letters. Minimize the number of fonts used.

— Use color functionally and consistently. Color can draw the reader's attention and emphasize important information. The use of color cannot be the sole means of conveying information or making distinctions. Another noncolor mode must complement color use, such as contrast, icon, text style, etc. (see VVSG).

— When clarifying instructions and processes, use accurate diagrams to describe voting technology and equipment.

— Use instructional icons only. Universally recognized icons such as arrows are acceptable and encouraged.

Research findings

Detailed findings that support ballot design best practices can be found in section 6 and section 7.

Planning process

The planning table on the following page outlines additional resources and steps that can be taken to ensure that ballot content and design best address voter needs.

These recommendations are based on the best practices in Cook County, Illinois, and the pilot test in Nebraska.

Planning goals

These additional resources can help ensure that:

— Content is easily understood by voters, including those with low vision and literacy issues.

— The visual organization and presentation of the content supports ease of use and confidence in the process.

— Any necessary translations are accurate and sensitive to cultural differences in language and expression.

Planning value by role/resource

— S*imple-language expert* ensures that instructions and other ballot content are written in the most effective manner to help all voters (not just low-literacy voters) understand and follow instructions, and feel confident that they have properly cast their ballots.

— *Information designer* organizes the ballot content—text, graphics, illustrations—in a manner that is clear, simple, and functional, and that supports and enhances the voter's comprehension of the content and voting process. (Note: The design field is very broad; it is important to work with a designer who has expertise in the organization and presentation of complex information.)

— *Usability expert* works with the information designer to develop review, testing, and revision processes that improve the ballot's overall effectiveness, accuracy, and usability.

— *Translator* ensures proper grammatical, syntactic, and structural character of the content, and appropriate use of local dialect variations. Accurate translations are vital for non-English speaking voters, and online translations are often misleading, unclear, or simply wrong (for Spanish translations, see EAC document "Glossary of Key Election Terminology, English-Spanish, 2007").

— *Cultural expert* reviews translated material to ensure that the translations are accurate and culturally relevant, and that their visual presentation is appropriate.

Production steps before election cycle		
Resources	*Planning, design, and usability activities*	*Tips*
1. Election Official	Use the current election to establish a baseline for future work. Get voter feedback before starting, not just afterward. Establish an approval process/team. Determine who must sign off on improvements at each phase.	
2. Election Official	Choose an objective, professional resource to take ownership of information design challenges. Simultaneously hire a designer and a usability professional who can offer additional feedback. Partner with a policy advisor who can help guide design improvements through the necessary legislative processes.	Whenever possible, hire a local person who will be able to meet with officials and the extended production team (vendors, printers, etc.). Provide the designer with poll worker training, as well as any feedback from voters or poll workers. Provide the designer with a complete list of current election documents and legal requirements.
3. Designer and Usability Expert	Review and become familiar with election design standards and recommendations. Understand variance between EAC best practices and local requirements for poll worker and voter materials.	
4. Election Official	Estimate value of design improvements. Gauge impact of the redesign process during the next election planning cycle.	

Resources during election cycle		
Resources	*Content development activities*	*Tips*
Simple-Language Expert	Edit final English-language content for low-literacy voters.	
Translator	Translate content for non-English-speaking voters.	Understand the translator's requirements before the election: data formats, time line, etc. Have a third-party expert review the translated materials after the initial draft. Legal advisors may need to review the materials after simple language and design have been incorporated.
Alternative Language/ Cultural Expert	Review translated content in each alternative language for cultural relevancy.	Translation services may not be aware of possible cultural sensitivities of translated material.
Designer	Election official provides designer with final content for different materials, in English and other languages, after they have been reviewed by simple language and cultural experts.	

Design

On pages 4.7–4.21, design best practices for a general election one-language ballot are illustrated. Production specifications and discussion notes are provided—including typeface,* type size, leading, line weights, tint fills, and distances between elements.

The ballot content used in these samples was originally developed by the National Institute of Standards and Technology (NIST) to illustrate a "moderately complex" ballot. Although it is impossible to cover every ballot scenario, most general election ballot layout issues can be addressed using these designs.

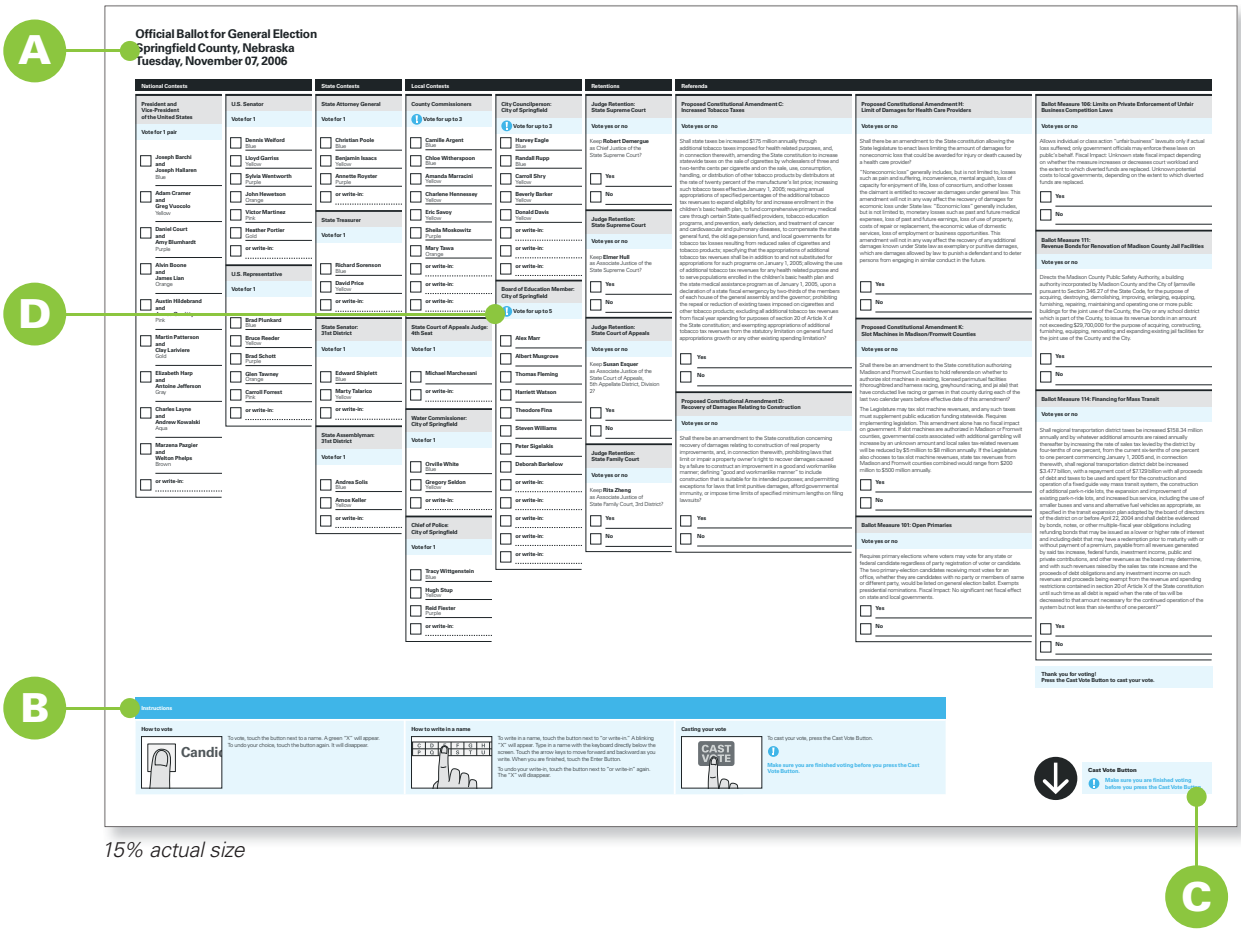
Components
As illustrated on the following page, a full-face DRE ballot has four basic component content areas:

- Ⓐ Election information (e.g., jurisdiction, general election, and date)
- Ⓑ Ballot instructions
- Ⓒ Ballot navigation, in this ballot type, refers to highlighting casting step
- Ⓓ Questions, including contests, retentions, and ballot measures

Each of these components is illustrated at its full size, and production specifications are included. Specifications are numbered from ① through ⑥.

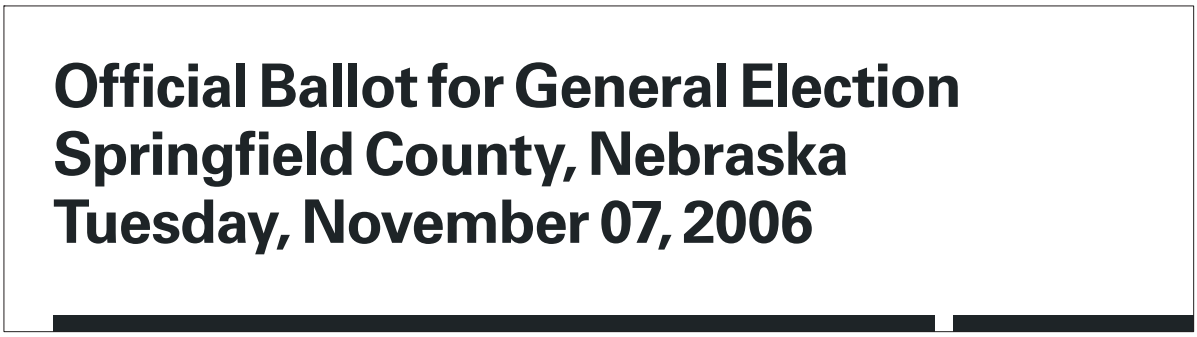
Designers can apply specifications in this section to other paper ballot formats, such as absentee, emergency, and primary election ballots.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.



15% actual size

1



75% actual size

Election information specifications

Information defining the specifics of the election should be placed above the left column of the face of every ballot page outside the area used by the voter and the scanner. Content should include the statement "Official Ballot," along with election type, location, and date. Local laws may require that additional information be included.

1 Information

On ballots with space constraints, election information may be set at a minimum size. For ballots with more available space, larger type is encouraged.

Minimum size type for all: Univers 65 Bold, size 18 pt., leading 20 pt., tracking -20, 100% black, left aligned.

Maximum size type for title: Univers 65 Bold, size 36 pt., leading 40 pt., tracking -20, 100% black, left aligned.

Maximum size type for location and date: Univers 65 Bold, size 30 pt., leading 34 pt., tracking -20, 100% black, left aligned.

Discussion

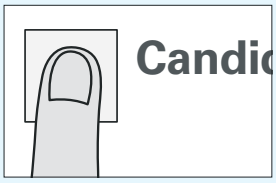
Although this is important content, it should not be set so large that it affects the amount of room left for instructions and ballot content actually used by the voter.

1

Instructions

2
3

How to vote

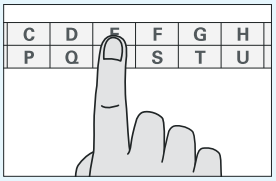


4

To vote, touch the button next to a name. A green "X" will appear. To undo your choice, touch the button again. It will disappear.

5

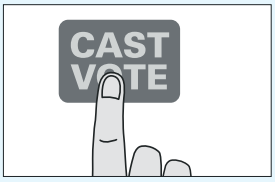
How to write in a name



To write in a name, touch the button next to "or write-in." A blinking "X" will appear. Type in a name with the keyboard directly below the screen. Touch the arrow keys to move forward and backward as you write. When you are finished, touch the Enter Button.

To undo your write-in, touch the button next to "or write-in" again. The "X" will disappear.

Casting your vote



To cast your vote, press the Cast Vote Button.

Make sure you are finished voting before you press the Cast Vote Button.

6

all 50% actual size

Ballot instruction specifications

Specifications for each instruction element are referenced by number below.

1 Main head
This header defines the complete instructions area for the voter.

Fill: 100% process cyan, 0.75" height, extends full width of the instructions area.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% white, left aligned, set 0.2" from left edge of fill, centered between top and bottom of fill.

2 Background fill
4.5 pt. white line between background tint and main head. 4.5 pt. white line between each instruction.

Fill: 10% process cyan, extends full width of the column and 0.2" above all instructions and 0.2" below the longest instruction.

3 Subhead
Begins 0.2" below top of fill.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2" from left edge of fill.

4 Illustration
Begins 0.2" below bottom of title.

Size: 0.2" inset from column width on both sides; height determined by most effective display of illustration (typically 1.5" to 3").

Stroke: 0.75 pt. line, 100% black.

5 Instruction text
Begins 0.2" from the right edge of illustration.

Type: Univers 45 Light, size 14 pt., leading 17 pt., tracking -20, 100% black, left aligned, set 0.2" from left edge of fill.

6 Alerts
These should be used only for critical instructions, such as actions that may invalidate a voter's ballot. Begins 0.2" below baseline of instruction content.

Attention icon: 0.375" diameter, 100% process cyan, set 0.2" from right edge of illustration.

Type: Univers 45 Bold, size 14 pt., leading 17 pt., tracking -20, 100% process cyan, left aligned, set 0.2" from left edge of illustration and 0.2" below Attention icon.

Discussion

The decision to apply color only to instructions is the result of feedback from optical scan ballot usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

Illustrative diagrams that accurately reflect the ballot type and equipment further clarify instructions and processes.

These illustrations are available at www.eac.gov.

Informational icons are used to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

Political party icons are not encouraged as literacy experts and design professionals believe they simply confuse many voters.

1

2 **Thank you for voting!**
Press the Cast Vote Button to cast your vote.

3 **Cast Vote Button**

Make sure you are finished voting before you press the Cast Vote Button.

4 

5 **National Contests**

all 75% actual size

Ballot navigation specifications

Specifications for each instruction element are referenced by number below.

1 Instruction fill
Navigational instructions should be placed at the end of the final column, to tell the voter what to do next.

Fill: 10% process cyan, extends full width of the column and 0.2" above and below all content.

2 Instruction content
Begins 0.2" below top of fill.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2" from left edge of fill, centered between top and bottom of fill.

3 Alerts
These should be employed only for critical instructions, such as actions that may invalidate a voter's ballot. Begins 0.2" below baseline of instruction content.

Attention icon: 0.375" diameter, 100% process cyan, set 0.2" from left edge of fill.

Type: Univers 45 Bold, size 14 pt., leading 16 pt., tracking -20, 100% process cyan, left aligned, set 0.2" below instruction content and 0.2" below Attention icon.

4 Cast Vote arrow
Use the Cast Vote arrow to designate the location of the Cast Vote Button below the ballot.

Cast Vote arrow icon: 1.5" diameter, 100% black, set 1.0" above the bottom edge of the ballot, directly above the Cast Vote Button.

5 Contest head
This header defines each separate contest area for the voter; it begins at the top of the column.

Fill: 100% black, extends full width of the contest area, using multiple columns if necessary, 0.2" above topmost ascender, and 0.2" below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% white, left aligned, set 0.2" from left edge of fill, centered between top and bottom of fill.

Discussion

These ballot navigation guides help indicate important steps.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

Informational icons such as arrows and exclamation points can be used to draw attention to unique or important areas of the ballot, or to improve the voter's ability to scan dense information.

These informational icons are available at www.eac.gov.

The decision to apply color only to instructions is the result of feedback from optical scan ballot usability testing and literacy experts.

1 2 3

President and Vice-President of the United States

Vote for 1 pair

- ☐ **Joseph Barchi and Joseph Hallaren** Blue
- ☐ **Adam Cramer and Greg Vuocolo** Yellow
- ☐ **Daniel Court and Amy Blumhardt** Purple
- ☐ **Alvin Boone and James Lian** Orange
- ☐ **Austin Hildebrand and James Garritty** Pink
- ☐ **Martin Patterson and Clay Lariviere** Gold
- ☐ **Elizabeth Harp and Antoine Jefferson** Gray
- ☐ **Charles Layne and Andrew Kowalski** Aqua

U.S. Senator

Vote for 1

- ☐ **Dennis Weiford** Blue
- ☐ **Lloyd Garriss** Yellow
- ☐ **Sylvia Wentworth** Purple
- ☐ **John Hewetson** Orange
- ☐ **Victor Martinez** Pink
- ☐ **Heather Portier** Gold
- ☐ **or write-in:** _____

U.S. Representative

Vote for 1

- ☐ **Brad Plunkard** Blue
- ☐ **Bruce Reeder** Yellow
- ☐ **Brad Schott** Purple
- ☐ **Glen Tawney** Orange
- ☐ **Carroll Forrest** Pink
- ☐ **or write-in:** _____

Board of Education Member: City of Springfield

! Vote for up to 5 4

- ☐ **Alex Marr**
- ☐ **Albert Musgrove**
- ☐ **Thomas Fleming**
- ☐ **Harriett Watson**
- ☐ **Theodore Fina**
- ☐ **Steven Williams**
- ☐ **Peter Sigelakis**
- ☐ **Deborah Barkelow**
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____

all 75% actual size

Contest question specifications

Contest question components include borders that separate contests, titles, special instructions, candidate/ticket information, and choices.

1 Border
This border defines the top, left, and bottom sides of the contest component.

Top line: 4.5 pt. line, 100% black, extends full width of the column.

Left line: 1.5 pt. line, 100% black.

Bottom line: 1.5 pt. line, 100% black, extends full width of the column; placed 0.2" below last content in column.

2 Contest title
This header defines each contest question; it begins directly below the top border.

Fill: 15% black, extends full width of the column, 0.2" above topmost ascender, and 0.2" below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2" from left edge of fill, centered between top and bottom of fill.

3 Contest instructions
This area defines each contest's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the column, 0.2" above topmost ascender, and 0.2" below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2" from left edge of fill, centered between top and bottom of fill.

4 Special instructions
When new or modified instructions are introduced, they should be called out to alert the voter. These are set identically to standard contest instructions, with the addition of an Attention icon.

Fill: 10% process cyan, extends full width of the column, 0.2" above topmost ascender, and 0.2" below lowest baseline of type.

Attention icon: 0.375" diameter, 100% process cyan, set 0.2" from left edge of fill, centered between top and bottom of fill.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2" from left edge of icon, centered between top and bottom of fill.

Discussion

Informational icons such as exclamation points and arrows are offered to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

These informational icons are available at www.eac.gov.

The use of political party icons is not encouraged as literacy experts and design professionals believe they simply confuse many voters.

The decision to apply color only to instructions is the result of feedback from optical scan ballot usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

The phrase "Vote for 1 pair" is recommended best practice by simple language experts.

Specifications continue on next page

U.S. Senator

Vote for 1

- ☐ **Dennis Weiford** Blue
- ☐ **Lloyd Garriss** Yellow
- ☐ **Sylvia Wentworth** Purple
- ☐ **John Hewetson** Orange
- ☐ **Victor Martinez** Pink
- ☐ **Heather Portier** Gold
- ☐ **or write-in:** _____

U.S. Senator

Vote for 1

- ☐ **Dennis Weiford** Blue
- ☐ **Lloyd Garriss** Yellow
- ☐ **Sylvia Wentworth** Purple
- ☐ **John Hewetson** Orange
- ☐ **Victor Martinez** Pink
- ☐ **Heather Portier** Gold
- ☐ **or write-in:** _____

U.S. Representative

Vote for 1

- ☐ **Brad Plunkard** Blue
- ☐ **Bruce Reeder** Yellow
- ☐ **Brad Schott** Purple
- ☐ **Glen Tawney** Orange
- ☐ **Carroll Forrest** Pink
- ☐ **or write-in:** _____

Board of Education Member: City of Springfield

Vote for up to 5

- ☐ **Alex Marr**
- ☐ **Albert Musgrove**
- ☐ **Thomas Fleming**
- ☐ **Harriett Watson**
- ☐ **Theodore Fina**
- ☐ **Steven Williams**
- ☐ **Peter Sigelakis**
- ☐ **Deborah Barkelow**
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____
- ☐ **or write-in:** _____

all 75% actual size

Contest question specifications, *continued*

5 Candidate information
First name begins 0.2" below bottom of instructions fill; on ballots with set selection locations, the distance may need to be greater. Subsequent names should begin 0.2" below separation line of previous candidate. Names should be set as close as possible to the selection location.

Name type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned.

Party type: Univers 45 Light, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned. On contests with a two-person ticket, the word "and" should be placed alone on a separate line between the two candidate names.

6 Separation line
Each candidate option should be followed by a line to clearly define it, even if it is the final option in a particular contest. Line should be placed no less than 0.2" below the bottom of candidate information; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.2" above top of following candidate name, if applicable.

Line: 0.375 pt. line, 100% black, extends full width of column area allowed for candidates.

7 Write-in
Begins 0.2" below final line of previous candidate.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned.

Write-in line: 0.75 pt. line, dashed 4 pt./4 pt., 100% black, extends full width of column area allowed for candidates.

Discussion

All candidates in any given contest should be given the same amount of vertical space. If a candidate's name must break onto a second line, the vertical space for all candidates should be changed to match.

Place the selection square to the left of the candidate/ticket name as shown on page 4.16.

1
2 **Judge Retention:**
State Supreme Court

3 **Vote yes or no**

Keep **Elmer Hull**
4 as Associate Justice of the
State Supreme Court?

5 ☐ **Yes**
6

☐ **No**

Judge Retention:
State Court of Appeals

Vote yes or no

Keep **Susan Esquer**
as Associate Justice of the
State Court of Appeals,
5th Appellate District, Division
2?

☐ **Yes**

☐ **No**

75% actual size

Retention question specifications

Retention questions include borders that separate each question, titles, special instructions, the question, and the choices.

1 Border
This border defines the top, left, and bottom sides of the question.

Top: 3.0 pt. line, 100% black, extends full width of the column.

Left: 1.5 pt. line, 100% black.

Bottom: 1.5 pt. line, 100% black, extends full width of the column; placed 0.2″ below last content in column.

2 Retention title
This header defines each retention question; it begins directly below the top border.

Fill: 15% black, extends full width of the column, 0.2″ above topmost ascender, and 0.2″ below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2″ from left edge of fill, centered between top and bottom of fill.

3 Retention instructions
This area defines each question's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the column, 0.2″ above topmost ascender, and 0.2″ below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2″ from left edge of fill, centered between top and bottom of fill.

4 Retention content
Presents the retention question clearly to the voter; the judge's name should be bold to add emphasis. Begins 0.2″ below bottom of instructions fill.

Content type: Univers 45 Light, size 14 pt., leading 17 pt., tracking -20, 100% black, left aligned.

Name type: Univers 65 Bold, size 14 pt., leading 17 pt., tracking -20, 100% black, left aligned.

5 Retention selection options
First selection option should begin 0.2″ below baseline of content; on ballots with set selection locations, the distance may need to be greater. Subsequent options should begin 0.2″ below final line of the previous option. Options should be set as close as possible to the selection location.

Option type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned.

6 Separation line
Each selection option should be followed by a line to clearly define it, even if it is the final option in a particular question. Line should be placed 0.2″ below baseline of selection option; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.2″ above top of following option, if applicable.

Line: 0.375 pt. line, 100% black, extends full width of column area allowed for selection options.

Discussion

The decision to apply color only to instructions is the result of feedback from optical scan ballot usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

All names in any given retention question should be given the same amount of vertical space. If a candidate's name must break onto a second line, the vertical space for all candidates should be changed to match.

Place the selection square to the left of the judge's name as shown on page 4.18.

1
2 **Ballot Measure 106: Limits on Private Enforcement of Unfair Business Competition Laws**

3 **Vote yes or no**

4 Allows individual or class action "unfair business" lawsuits only if actual loss suffered; only government officials may enforce these laws on public's behalf. Fiscal Impact: Unknown state fiscal impact depending on whether the measure increases or decreases court workload and the extent to which diverted funds are replaced. Unknown potential costs to local governments, depending on the extent to which diverted funds are replaced.

5 ☐ **Yes**

6 ☐ **No**

Ballot Measure 111:
Revenue Bonds for Renovation of Madison County Jail Facilities

Vote yes or no

Directs the Madison County Public Safety Authority, a building authority incorporated by Madison County and the City of Ijamsville pursuant to Section 346.27 of the State Code, for the purpose of acquiring, destroying, demolishing, improving, enlarging, equipping, furnishing, repairing, maintaining and operating one or more public buildings for the joint use of the County, the City or any school district which is part of the County, to issue its revenue bonds in an amount not exceeding $29,700,000 for the purpose of acquiring, constructing, furnishing, equipping, renovating and expanding existing jail facilities for the joint use of the County and the City.

☐ **Yes**

☐ **No**

75% actual size

Ballot measure specifications

Ballot measure components include borders that separate each question, titles, instructions, the question, and the choices.

1 Border
This border defines the top, left, and bottom sides of the question.

Top: 3.0 pt. line, 100% black, extends full width of the ballot measure area.

Left: 1.5 pt. line, 100% black.

Bottom: 1.5 pt. line, 100% black, extends full width of the ballot measure area; placed 0.2″ below last content in ballot measure area.

2 Ballot measure title
This header defines each separate ballot measure question; it begins directly below the top border.

Fill: 15% black, extends full width of the ballot measure area, 0.2″ above topmost ascender, and 0.2″ below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2″ from left edge of fill, centered between top and bottom of fill.

3 Ballot measure instructions
This area defines each question's instructions; it begins directly below the header.

Fill: 10% process cyan, extends full width of the ballot measure area, 0.2″ above topmost ascender, and 0.2″ below lowest baseline of type.

Type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned, set 0.2″ from left edge of fill, centered between top and bottom of fill.

4 Ballot measure content
Presents the ballot measure question clearly to the voter; it begins 0.2″ below bottom of instructions fill, set 0.2″ from left border. In a two-column ballot measure area, space for text should extend to 0.2″ from the right edge of the ballot measure area. In a three-column ballot measure area, the space for text should extend no wider than 6″.

Content type: Univers 45 Light, size 14 pt., leading 17 pt., tracking -20, 100% black, left aligned.

5 Ballot measure selection options
First selection option should begin 0.2″ below baseline of content; on ballots with set selection locations, the distance may need to be greater. Subsequent options should begin 0.2″ below final line of previous option. Options should be set as close as possible to the selection location, ideally in the left-most column of the ballot measure area.

Option type: Univers 65 Bold, size 14 pt., leading 16 pt., tracking -20, 100% black, left aligned.

6 Separation line
Each selection option should be followed by a line to clearly define it, even if it is the final option in a particular question. Line should be placed 0.2″ below baseline of selection option; on ballots with set selection locations, the distance may need to be greater. Line should also be located 0.2″ above top of following option, if applicable.

Line: 0.375 pt. line, 100% black, extends full width of ballot measure area allowed for selection options.

Discussion

A primary voter criticism of ballots is the length and complexity of ballot measures. It is imperative that these questions be written in the simplest language possible. Many jurisdictions also provide summaries.

The typesetting of the ballot measure text is critical. Too many or too few characters per line inhibit legibility and comprehension. The goal should be 40–60 characters per line. Research indicates that many users find line lengths of more than 60 characters or less than 20 characters hard to read.

There is a direct relationship between type size and line spacing (leading). Lines of type that are too close together or too far apart inhibit legibility and comprehension. Ballot measure content in these best practices is set at 14 points, with 3 points of leading.

The decision to apply color only to instructions is the result of feedback from optical scan ballot usability testing and literacy experts.

Depending on the printer, paper used, and other production variables, the percentages specified for fills (e.g., 10% process cyan) may need to be adjusted. The vendor should provide a test sample for review.

Samples

Full-face DRE ballot design best practices samples appear on pages 4.23–4.25. For the one-color version, specifications that vary from those outlined in the Design section are detailed opposite the example.

The ballot content used in these samples was originally developed by the National Institute of Standards and Technology to illustrate a "moderately complex" ballot. Although it is impossible to cover every ballot scenario, most general election ballot layout issues can be addressed using this content.

Electronic files
The electronic files that were used to create these best practices are available at www.eac.gov.

They are provided in two formats: Acrobat (.pdf) and InDesign (.indd).*

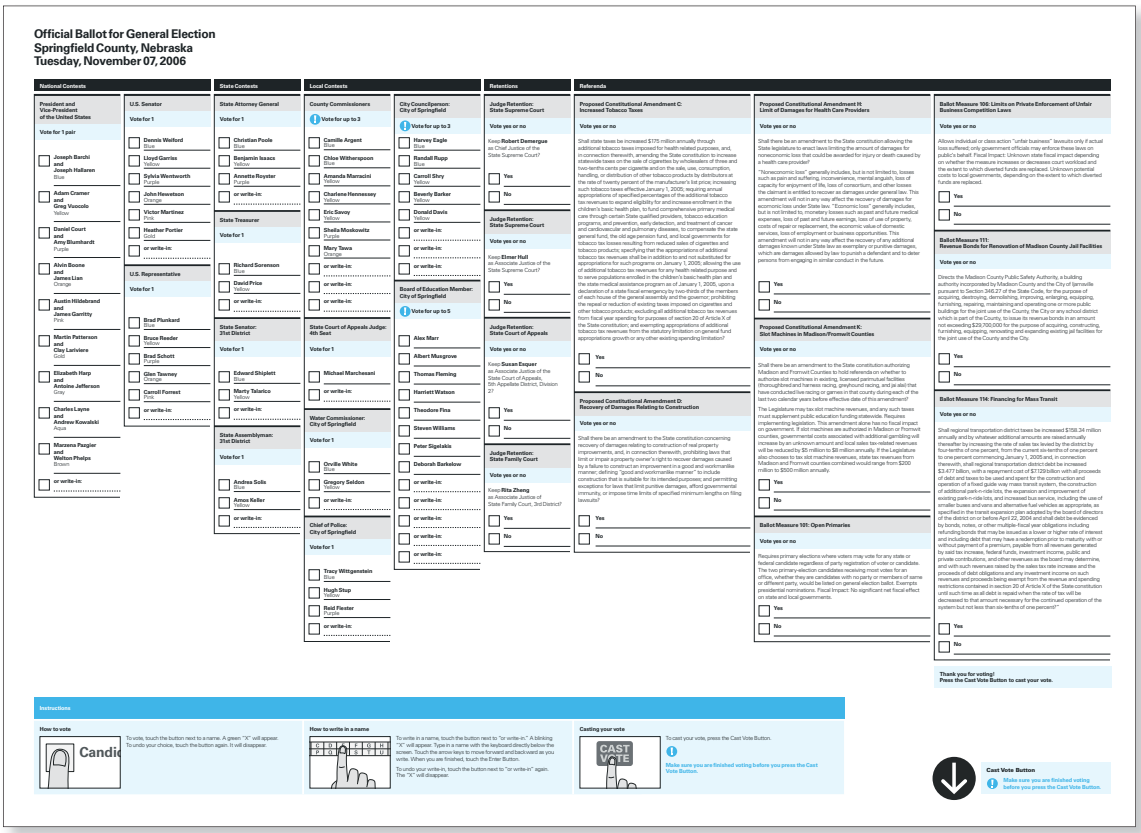
Each item has a unique identification number and file name. For example, the Acrobat file of the illustration on the next page is "FullFace_1L_VersionA.pdf."

How to work with the samples and electronic files
The Acrobat files can be printed on an office printer (depending on paper size), or by a local vendor with digital printing capabilities (printing firms and copy shops often have digital printing capabilities). Printed versions of these samples will serve as an important reference during the ballot design and production process.

InDesign files are template files that can be edited. The illustrative diagrams used in the InDesign files are also available at www.eac.gov. These files end with ".eps" and can also be edited. Access to Adobe InDesign page layout software and to software that can edit .eps files (e.g., Adobe Illustrator) is necessary. Working with a designer who has access to—and expertise in—these software programs is recommended.

Alternatively, these items can be recreated in other page layout programs using the production specifications provided on pages 4.6–4.21; the Acrobat .pdf files as a visual guide; and, if appropriate, the illustration files provided. Using nonlayout programs, such as those commonly used to write text-only documents, is not appropriate or recommended.

*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.



15% actual size

File name

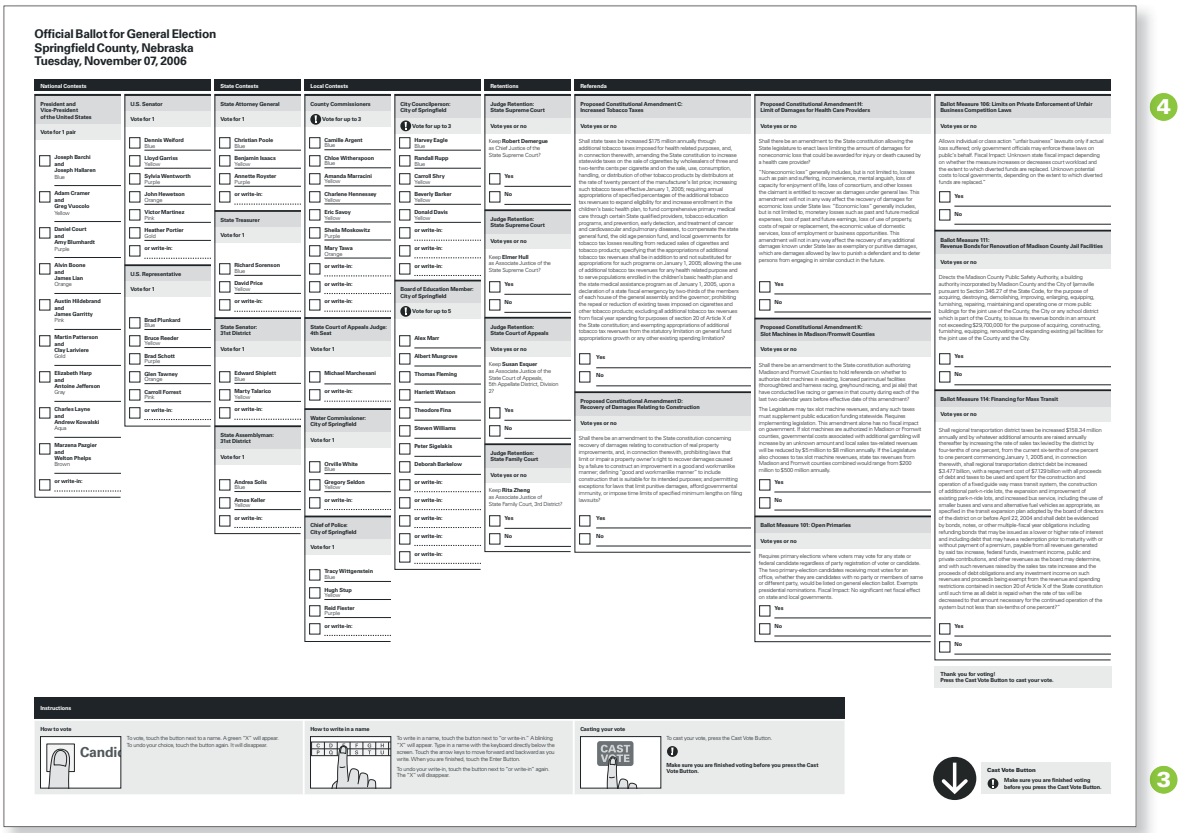
FullFace_1L_VersionA

See pages 4.8–4.21 for additional production specifications.

File name

FullFace_1L_1Color

See pages 4.8–4.21 for additional production specifications.



15% actual size

One-color version specifications

If circumstances dictate that ballots be printed in only one color, certain adjustments should be made to the specifications.

1. **Instruction title**
   Rather than process cyan, this title should be 100% black.
2. **Instructional fills**
   For all background fills, change from process cyan to 10% black. This includes the fills used with all ballot instructions, all question instructions, and all navigational instructions.
3. **Alert and navigation icons**
   For all background fills, change from process cyan to 10% black. This includes the fills used with all ballot instructions, all question instructions, and all navigational instructions.
4. **Question titles**
   To create appropriate contrast from question instructions, all question header fills should be 20% black rather than the 15% used on two-color ballots.

Effective Designs for the Administration of Federal Elections

Section 5: Rolling DRE ballots

June 2007

U.S. Election Assistance Commission

Rolling direct-recording electronic (DRE) ballot interface

This section has three parts: (1) planning process information; (2) an overview of the basic rolling DRE voting process, and (3) illustrations of core screen templates.

Planning
The planning section on pages 5.4 and 5.5 outlines how to incorporate resources into your ballot development and production process; areas in which those resources may be of assistance; and when those activities should occur. It offers tips on possible challenges and opportunities.

Voting process
This section describes the basic linear voting experience offered by our rolling DRE ballot. Core user activities in all DRE systems include voting, reviewing votes, casting votes, getting help, and adjusting screen settings.

Design templates
Essential screen templates, designed in support of primary values for the DRE voting process (page 5.6) are outlined on pages 5.32–5.37.

Voter audience
This section details interface solutions for voters able to interact with a standard rolling DRE touchscreen input. Solutions use text sizes stipulated in 2005 Voluntary Voter System Guidelines (VVSG). Ballot instructions, labels, and navigation are written in simple language to support comprehension by voters at a third-grade reading level.

Rolling DRE specifications are based on information design principles, primary research findings, and accessibility requirements cited in VVSG section 3.2.

Investigation into the design of hardware leading to fully accessible voting solutions is strongly encouraged but was not a part of this effort—the contractor did not work with vendors on this particular aspect.

Final materials have been informed by an iterative research process involving reviews of existing products and practices, usability evaluations with representative voters, and interviews with elections professionals, subject matter experts, and poll workers. Without collaboration with vendors, design recommendations do not address the critical relationship between interaction design and hardware that many people with disabilities rely upon to vote. The best practices in this section focus exclusively on screen interactions.

Areas of further study
System solutions for alternative input/output variations (combining tactile, audio, and visual toolsets) and accessible prototypes for a Voter-Verified Paper Audit Trail (VVPAT) are recommended.

Suggestions for best practices

The general election rolling DRE ballot prototypes shown on the following pages are based on VVSG, Americans with Disabilities Act (ADA) guidelines, research findings, and information design principles.

— Emphasize voter needs over administrative and vendor requirements. Ensure that default screen settings (type size, color use, contrast levels) are usable for the broadest range of voters as is reasonably possible.

— Process should be clear. Voters should always know where they are in the process. At the contest level, voters should know how to vote in a particular contest or question and know how many votes they have remaining in multi-selection contests.

— Ensure that screen settings for language choices, text size, contrast, and audio support are readily available and easy to change.

— Use simple language for all content. Studies show that clear and concise writing is beneficial to voters of all literacy levels. Rewriting ballot instructions and voter information materials using simple language increases usability and, on the voter's behalf, accuracy.

— Use color functionally to emphasize important information, highlight processes, and support usability needs. However, the use of color cannot be the sole means of conveying information or making distinctions. Some other noncolor mode such as contrast, icon, text style, etc., must complement the color. This is a mandatory VVSG requirement to address color blindness.

— Ensure that voters can review their voting record and change their votes from any point in the ballot.

— Ensure that voters can easily compare their on-screen voting record with their printed record. Provide redundant confirmations before a ballot is cast.

— Use upper- and lowercase sans serif type, set at a minimum of 25 points, for all ballot content voters will read. Given a choice between adequate type size and reducing the need to scroll lengthy referenda text, ballots with larger type were found to be more usable, even if voters needed to scroll. Avoid setting text in a centered alignment. Avoid setting text in all capital letters. Minimize the number of fonts used.

— Consideration should be given to candidate name order being rotated from precinct to precinct, so that all candidates will be listed first in roughly an equal number of precincts.

— Use instructional icons only. Universally recognized icons such as arrows are acceptable and encouraged.

Research findings

Detailed findings that support the DRE ballot design best practices are in section 7.

Planning process

The planning table on the following page outlines additional resources and steps that can be taken to ensure that ballot content and design best address voter needs.

These recommendations are based on the best practices in Cook County, Illinois, and the pilot test preparations in Nebraska.

Planning goals

These additional resources can help ensure that:

— Content is easily understood by voters, including those with low vision and literacy issues.

— The visual organization of the content supports ease of use and confidence in the process.

— Any necessary translations are accurate and sensitive to cultural differences in language and expression.

Planning value by role/resource

— S*imple-language expert* ensures that instructions and other ballot content are written in the most effective manner to help all voters (not just low-literacy voters) understand and follow instructions, and feel confident that they have properly cast their ballots.

— *Information designer* organizes the ballot content—text, graphics, illustrations—in a manner that is clear, simple, and functional, and that supports and enhances the voter's comprehension of the content and voting process. (Note: The design field is very broad; it is important to work with a designer who has expertise in the organization and presentation of complex information.)

— *Usability expert* works with the information designer to develop review, testing, and revision processes that improve the ballot's overall effectiveness, accuracy, and usability.

— *Translator* ensures proper grammatical, syntactic, and structural character of the content, and appropriate use of local dialect variations. Accurate translations are vital for non-English-speaking voters, and online translations are often misleading, unclear, or simply wrong (for Spanish translations, see EAC document "Glossary of Key Election Terminology, English-Spanish, 2007").

— *Cultural expert* reviews translated material to ensure that the translations are accurate and culturally relevant, and that their visual presentation is appropriate.

Production steps before election cycle		
Resources	*Planning, design, and usability activities*	*Tips*
1. Election Official	Use the current election to establish a baseline for future work. Get voter feedback before starting, not just afterward. Establish an approval process/team. Determine who must sign off on improvements at each phase.	
2. Election Official	Choose an objective, professional resource to take ownership of information design challenges. Simultaneously hire a designer and a usability professional who can offer additional feedback. Partner with a policy advisor who can help guide design improvements through the necessary legislative processes.	Whenever possible, hire a local person who will be able to meet with officials and the extended production team (vendors, printers, etc.). Provide the designer with poll worker training, as well as any feedback from voters or poll workers. Provide the designer with a complete list of current election documents and legal requirements.
3. Designer and Usability Expert	Review and become familiar with election design standards and recommendations. Understand variance between EAC best practices and local requirements for poll worker and voter materials.	
4. Election Official	Estimate value of design improvements. Gauge impact of the redesign process during the next election planning cycle.	

Resources during election cycle		
Resources	*Content development activities*	*Tips*
Simple-Language Expert	Edit final English-language content for low-literacy voters.	
Translator	Translate content for non-English-speaking voters.	Understand the translator's requirements before the election: data formats, time line, etc. Have a third-party expert review the translated materials after the initial draft. Legal advisors may need to review the materials after simple language and design have been incorporated.
Alternative Language/ Cultural Expert	Review translated content in each alternative language for cultural relevancy.	Translation services may not be aware of possible cultural sensitivities of translated material.
Designer	Election official provides designer with final content for different materials, in English and other languages, after they have been reviewed by simple language and cultural experts.	

Voting process

The rolling DRE interface design in this section supports intentional ballot completion by voters. Content, design, functionality, and navigation elements have each been developed to support this primary goal.

The interface design is based on VVSG statements on accessible type sizes for electronic displays. This default type size minimizes the screen setting steps required of low vision and it eliminates the need for many to adjust type size at all. This accessible type size allows language selection to be the first screen the voter sees. A voter can then receive all ballot content in their preferred language—without resorting to the "help" section or requesting help from a poll worker.

Depending on screen resolution and screen orientation, more candidates may be displayed than are shown in the examples. If there are more candidates than will fit on one screen, an alternative would be to reduce button size based on the following criteria:

VVSG minimum button height is 0.5 inches and the minimum distance between buttons is 0.1 inches. Using the accessible type size illustrated here, buttons could be reduced to .62 inches in height (the accessible type size will not comfortably fit in a button only 0.5 inches in height) and the distance between buttons could be decreased to 0.1 inches to allow more names to appear on the screen at one time.

Key features of the voter's experience are as follows:

— Clear, simple instructions
— Completion indicators
— Persistent review/edit access prior to casting vote
— Undervoting notifications
— Easy to access help, instructions, and screen settings

The central rolling DRE flow (shown on the following pages) is organized in a linear voting sequence. This sequence first presents the core voting tasks and options, followed by optional or nonrequired paths (such as accessing voting help).

Core tasks include:

— Selecting a language
— Voting
— Reviewing choices
— Casting the ballot

Optional tasks:

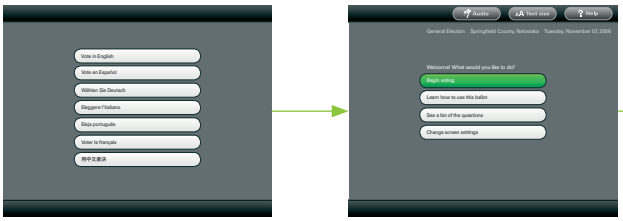
— Accessing help
— Adjusting settings

Experience flow

The map on the next page presents an overview of the primary voting path and the navigational options that move users between task "sections." A map of the Help and adjustment screens, which are accessible from all points in the primary path, appears on the right-hand page.

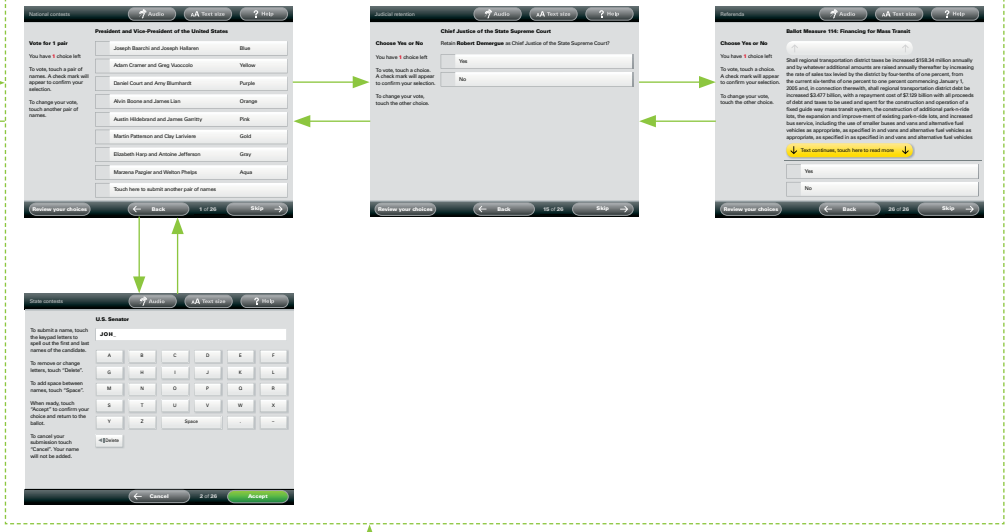
A detailed walkthrough of the core path begins on page 5.9.

Select language



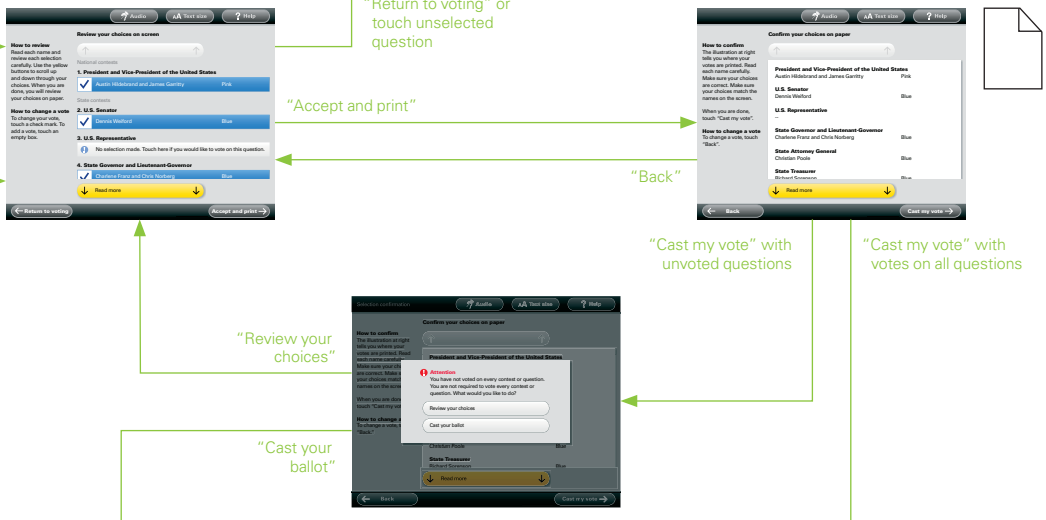
"Begin voting"

Vote



"Review your choices" or complete last question

Review



"Return to voting" or touch unselected question

"Accept and print"

"Back"

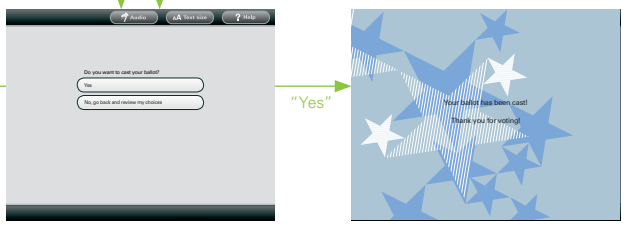
"Cast my vote" with unvoted questions

"Cast my vote" with votes on all questions

"Review your choices"

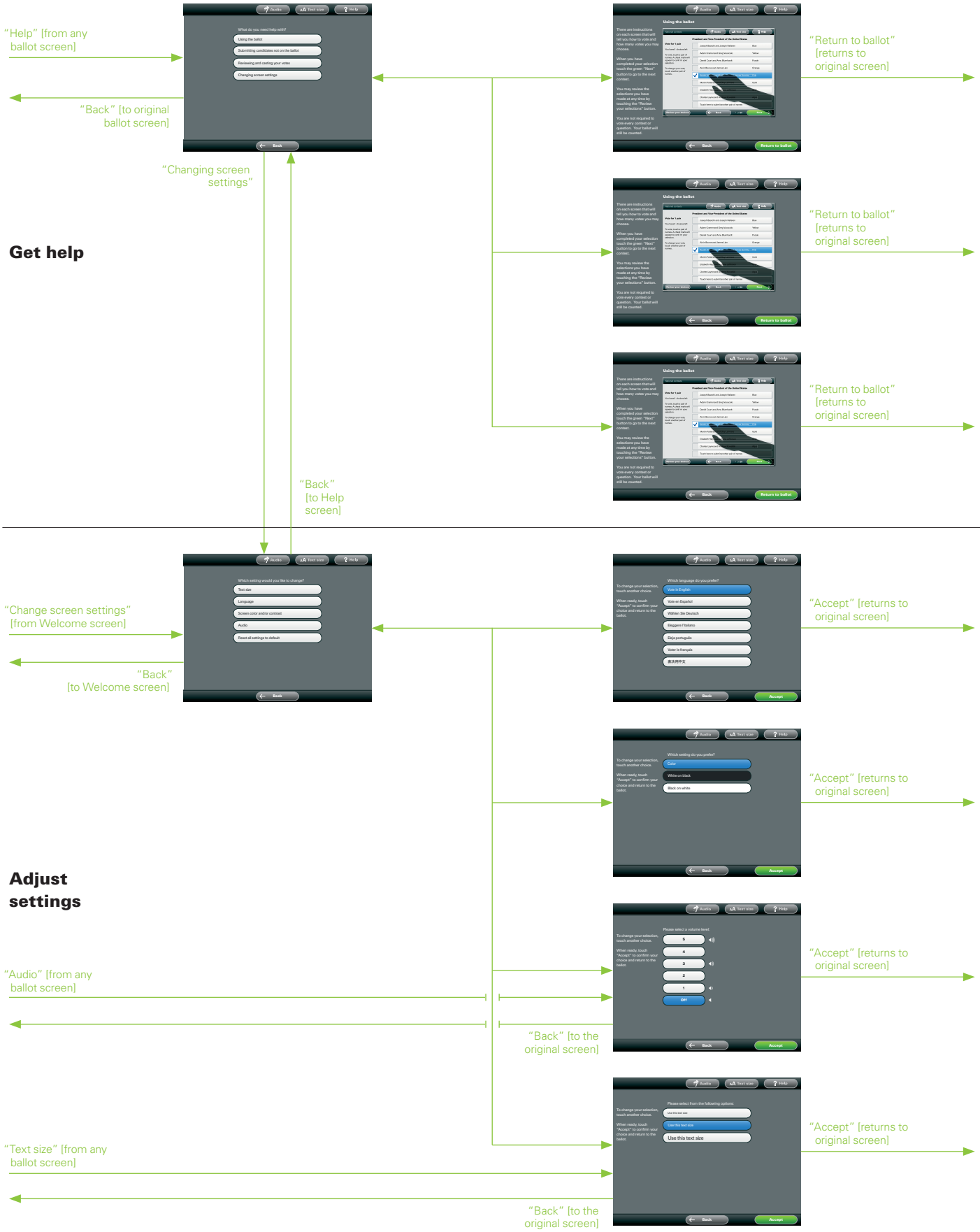
"Cast your ballot"

Cast



"No, go back and review my choices"

"Yes"


"Help" [from any ballot screen]
"Back" [to original ballot screen]
"Changing screen settings"
"Return to ballot" [returns to original screen]
"Return to ballot" [returns to original screen]
"Return to ballot" [returns to original screen]
Get help
"Back" [to Help screen]
"Change screen settings" [from Welcome screen]
"Back" [to Welcome screen]
"Accept" [returns to original screen]
"Accept" [returns to original screen]
Adjust settings
"Audio" [from any ballot screen]
"Back" [to the original screen]
"Accept" [returns to original screen]
"Text size" [from any ballot screen]
"Back" [to the original screen]
"Accept" [returns to original screen]

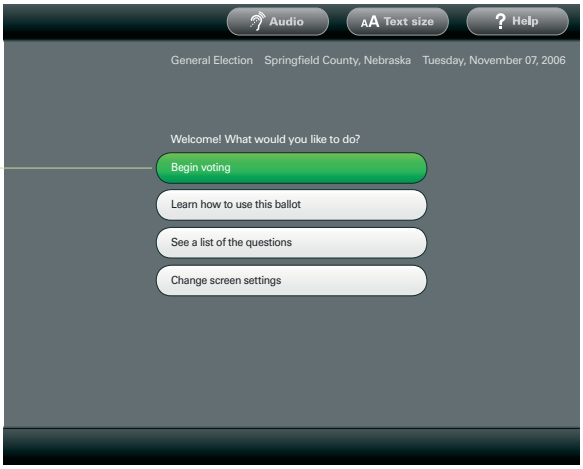
Language selection, Welcome, and Voting

Language selection screen
Before any voting takes place, voters are asked to choose their preferred language.

When the voter selects the language, the Welcome screen (below) appears in the chosen language.

The screen can accommodate up to nine language buttons.

The voter can change the language through the "Help" button from any screen on the ballot.

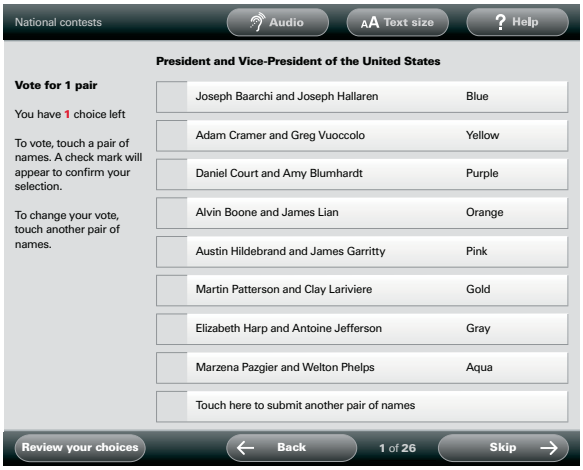


Welcome screen
All content appears in the selected language.

The "Begin voting" button 1 takes the voter to the first contest screen (below).

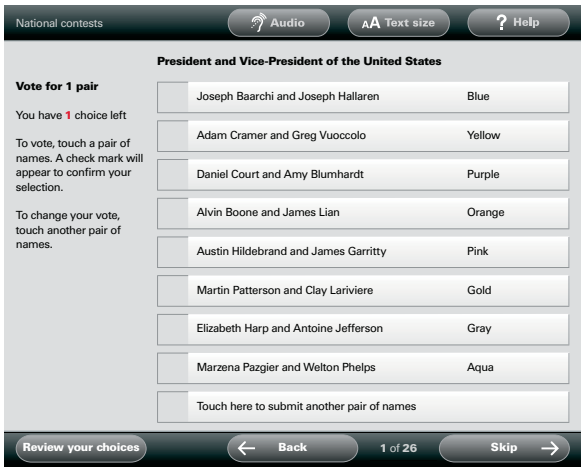
Options to learn how to the use the ballot 2, to see a list of the ballot's contests and questions 3, and to change screen settings 4 are also offered.

Persistent Audio, Text size, and Help options are introduced in the top band.



Contest screen
After the voter touches the "Begin voting" button (above), the first contest screen appears and the voter can begin voting.

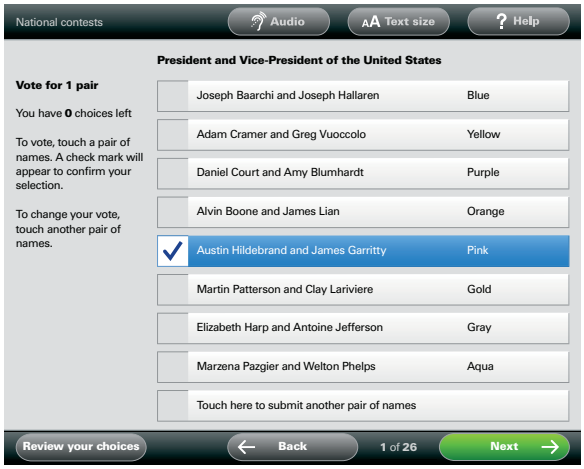
Voting: single selection



Contest screen
A "voter counter" indicates the number of votes remaining. Instructions explain how to make a selection and how to change a selection.

The voter is given a large touch area.

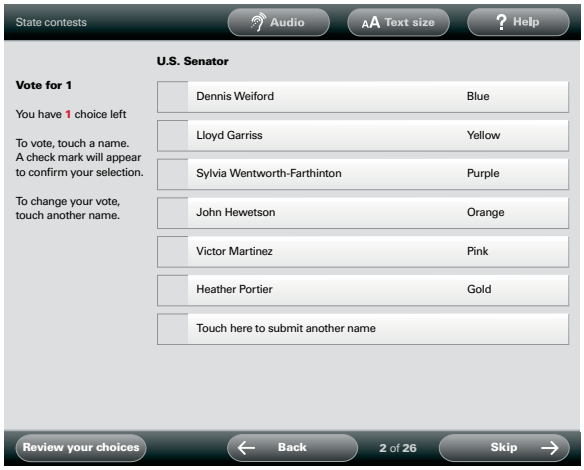
If the voter chooses to skip a contest by touching the "Skip" button 1, the next contest screen will appear.



When the voter makes a selection, it is highlighted by a check mark, color change, and contrast change.

Vote counter changes to indicate "0" votes remaining.

The navigation button 2 changes from "Skip" to "Next," and the color changes to green.



After the voter touches the "Next" button, the next contest screen appears and the above sequence is repeated.

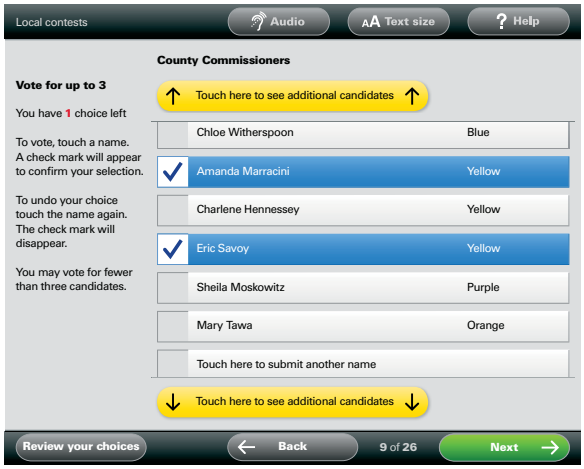
Voting: multiple selections

1

Contest screen
A vote counter indicates the number of votes remaining.

If the voter chooses to skip a contest by touching the "Skip" button 1, the next contest screen will appear.

With lengthy lists of candidates, scrolling may be necessary. Color and shape are used to differentiate scroll buttons from candidate buttons.

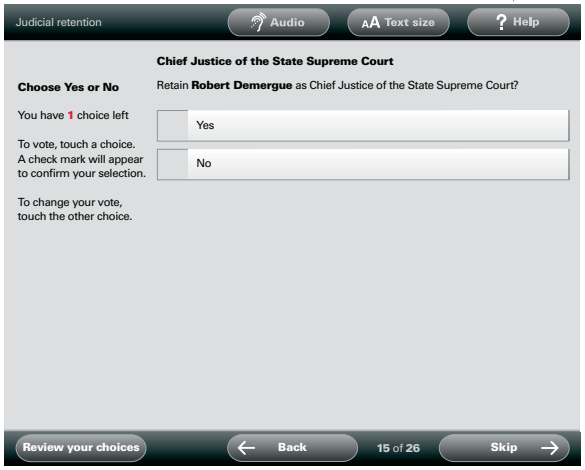


2

Voter makes selection. Selection is highlighted via check mark, color change, and contrast change.

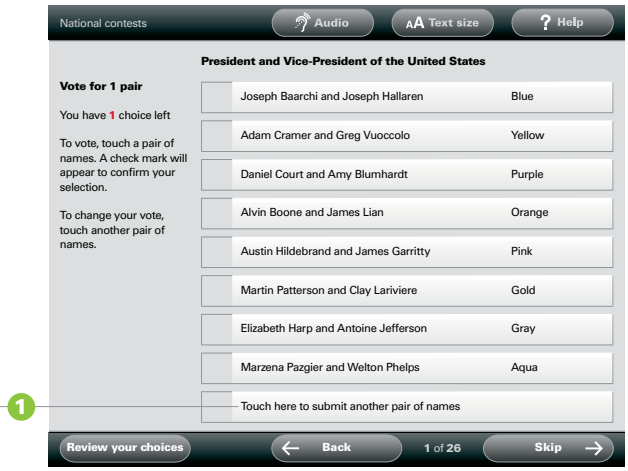
The vote counter changes to indicate the number of votes remaining.

The navigation button 2 changes from "Skip" to "Next," and the color changes to green.



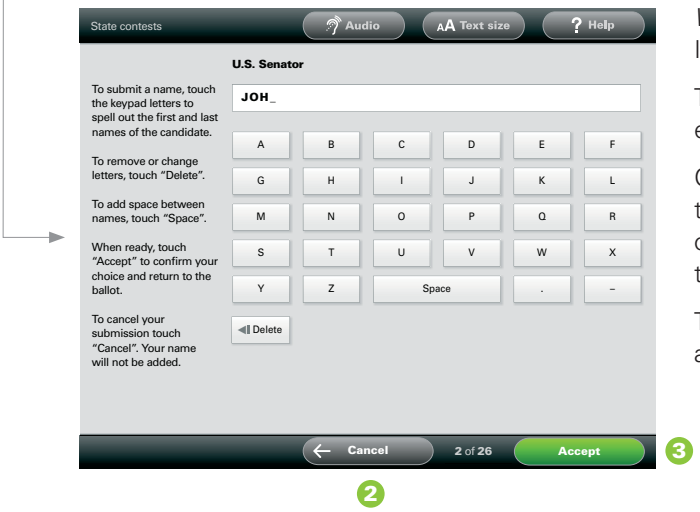
After the voter touches the "Next" button, the next question screen appears and the above sequence is repeated.

Voting: submitting names not on the ballot (write-in)



Contest screen
The voter chooses to submit a candidate not listed on the ballot ("Write-in") and touches the button labeled "Touch here to submit another candidate" 1.

The voter moves to the "Write-in" screen.

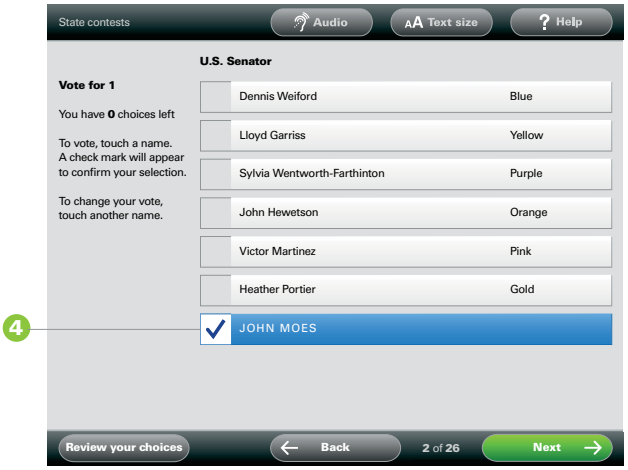


Write-in screen
Instructions specify the keypad entry method.

The voter has the option to cancel 2 or accept 3 an entry.

Once the choice is accepted, the voter is returned to the contest screen. Touching either the "Cancel" or "Accept" navigation buttons returns the voter to the previous contest screen.

The A-B-C keypad format is the current standard among electronic voting machines.

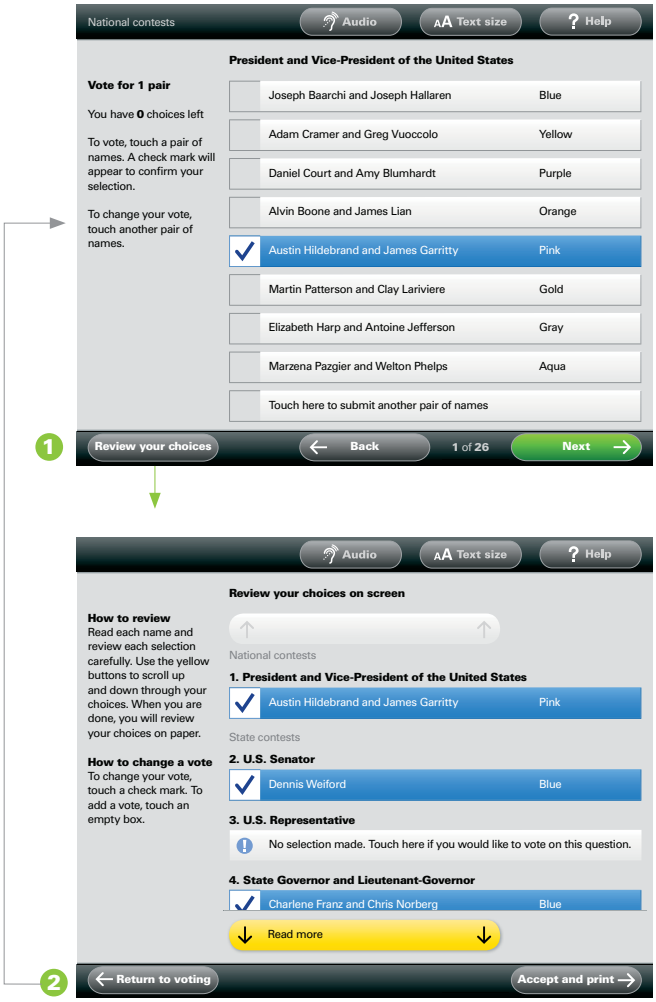


Contest screen
The submitted name appears on the contest screen 4.

The voter may touch the "Next" button to move on to the next screen.

If the voter selects an existing name, the "Write-in" button will return to its original state and the new selection will be highlighted.

Accessing the review screen

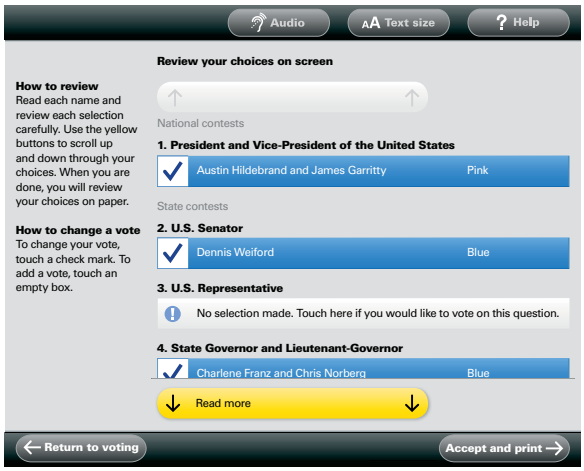


Contest screen
From any point in the ballot the voter may access the review screen by touching the "Review your choices" button 1.

Review screen
Touching the "Return to ballot" button 2 returns the voter to the previous contest or question.

The Review screen shows the updated list of votes upon each return.

Reviewing and revising choices



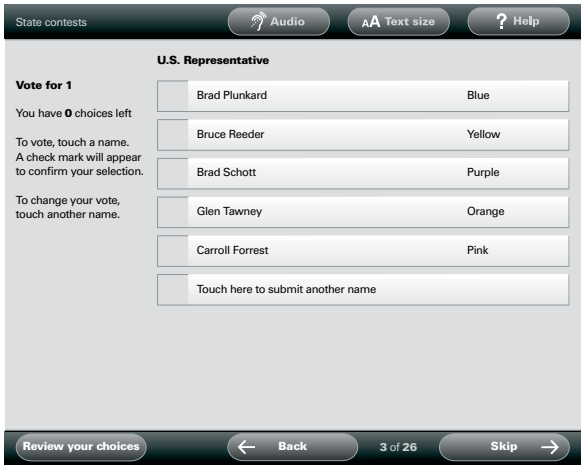
1

Review screen
Voters use the scroll buttons to review their list of votes.

Any unvoted or undervoted contests or questions 1 are clearly indicated.

Touching a name again or touching a button that indicates an unvoted or undervoted contest or question takes the voter to that contest screen.

As shown here, the buttons that indicate a selection match the buttons the voter is familiar with from the voting screens.



2

Voting screen
At the voting screen the voter can make or revise a selection.

Touching the "Review your choices" button 2 returns voters to the review page—*at the point in the list from which they left.*

Alternatively, the voter can touch the "Next/Skip" button and move to the next contest screen.

3

Revised review screen
The new or revised selection is indicated on the updated review screen.

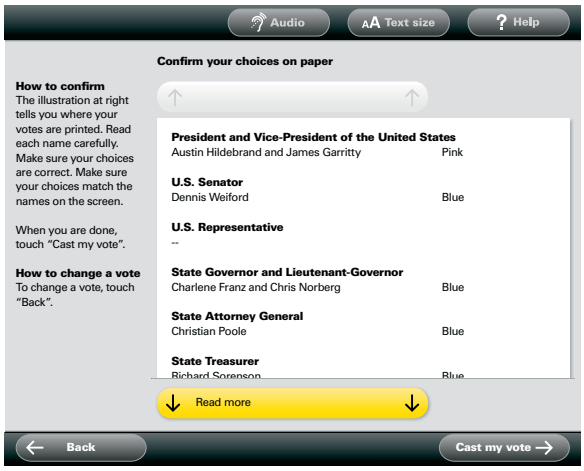
Voter can continue to review their choices or move on to printing their paper verified ballot.

Confirming selections, printing verified ballot, and casting the ballot

Review screen

If all contests and questions have been voted on and the voter is satisfied with the on-screen review, the voter touches the "Accept and print" button 1.

The voter then moves to the confirm choices screen.

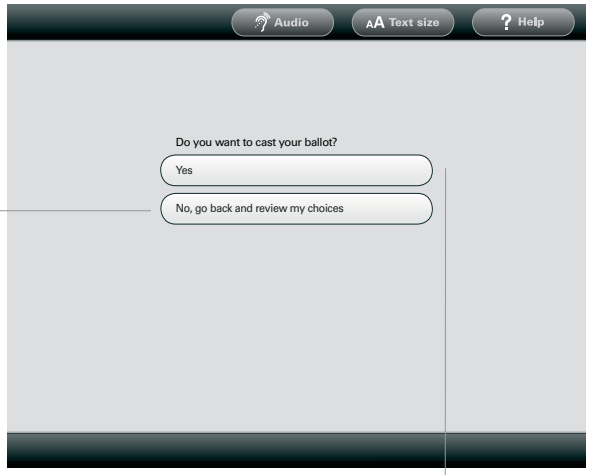


Confirm choices screen

This screen shows a facsimile of the printed verified ballot which the voter may match with the printed verified ballot (not shown). These two items should be identical.

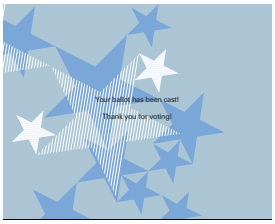
To accept the paper verified ballot, the voter touches the "Cast my vote" button 2.

If the voter notices inconsistencies between the verified ballot (paper) and the voting tally on screen, a poll worker should be notified.

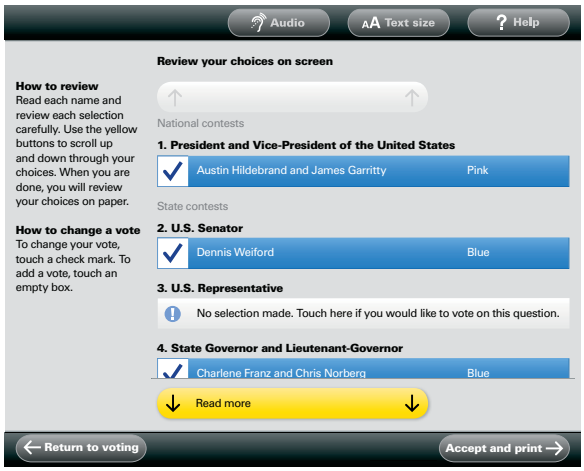


Cast ballot screen

The Cast ballot screen gives voters one more opportunity to go back to the review screen 3, or they can touch the "Yes" button 4 and finish.



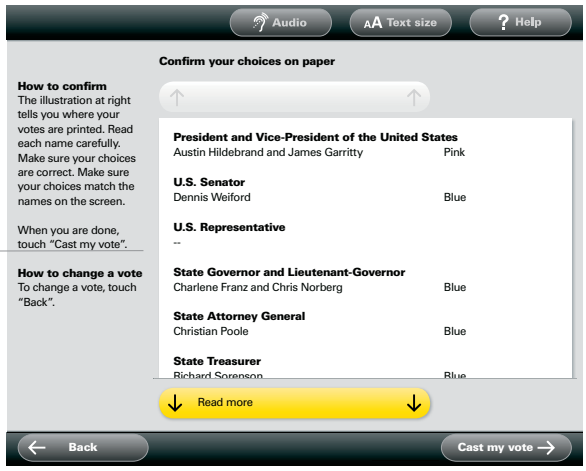
Confirming selections, printing verified ballot, and casting the ballot



Review screen

If all contests and questions have **not** been voted but the voter is satisfied with the on-screen review, the voter can touch the "Accept and print" button 1.

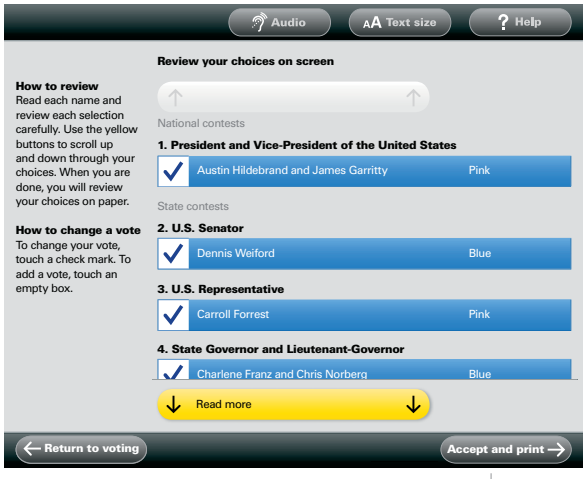
An alert will appear cautioning that the voter has undervoted.



Undervote alert screen

This screen gives the voter two choices: either return to the review page and revise the ballot 2 or cast the ballot (even though it is undervoted).

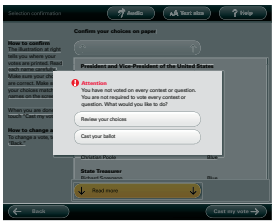
Voters who choose to continue will move to the Confirm screen.



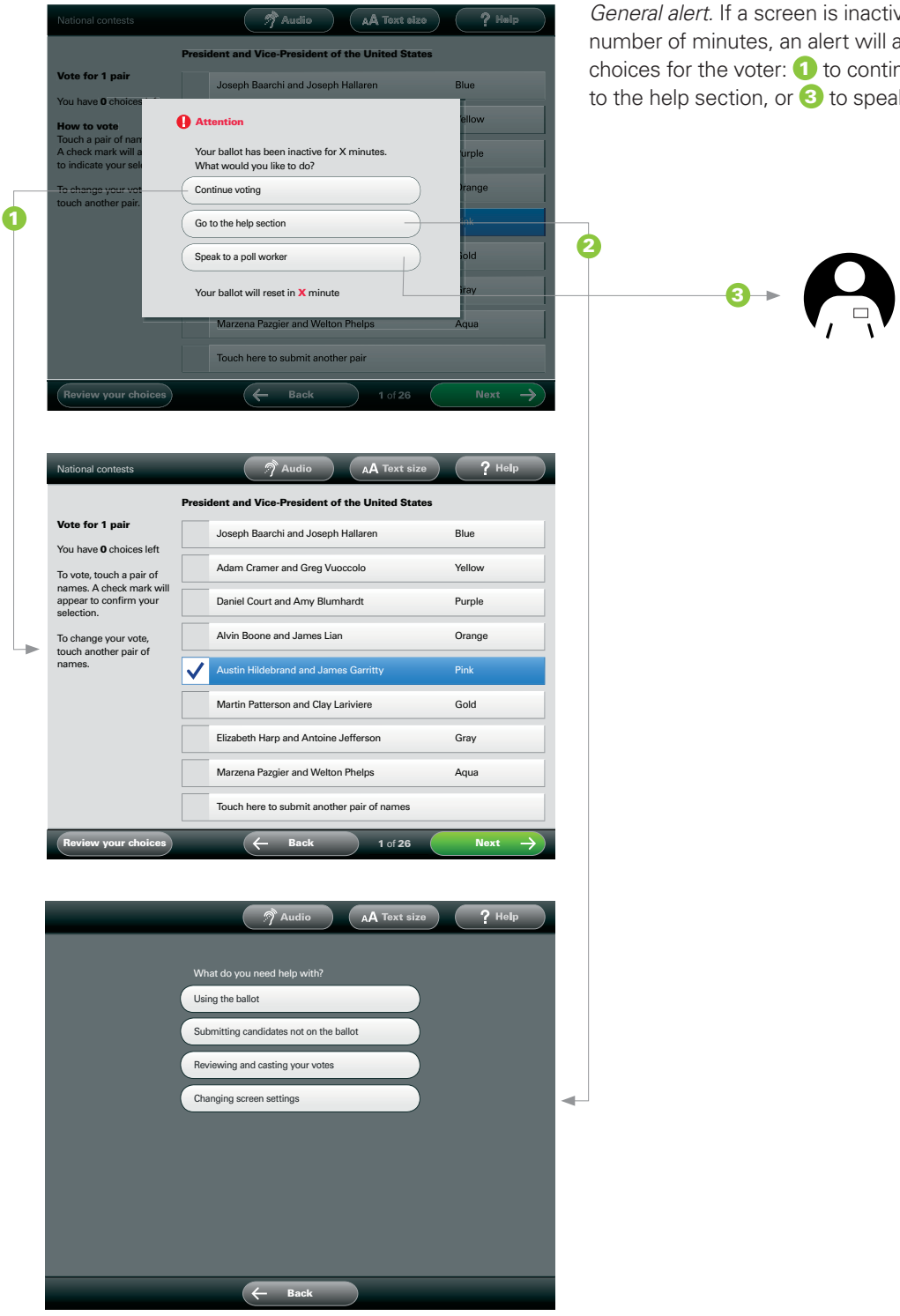
Confirm choices screen

This screen contains an on-screen facsimile of the printed verified ballot which the voter may match with the printed verified ballot (not shown). These two items should be identical.

To accept the paper verified ballot, the voter touches the "Cast my vote" button 3.

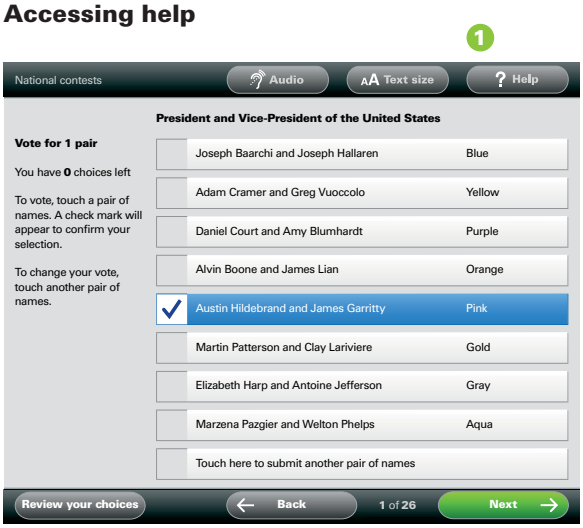


System alerts

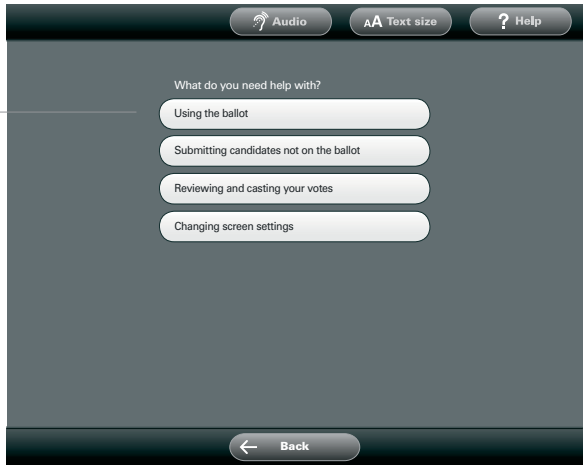


General alert. If a screen is inactive for a specified number of minutes, an alert will appear with three choices for the voter: 1 to continue voting, 2 to go to the help section, or 3 to speak to a poll worker.

Accessing help



From any screen the voter can access the Help main screen by touching the "Help" button 1.



Main help screen

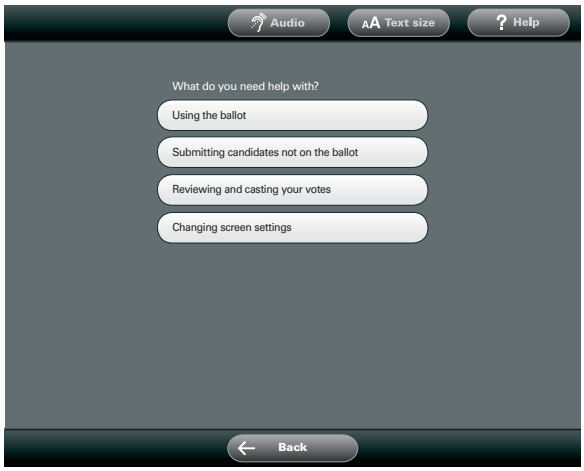
This screen serves as a hub, with four choices: the "Using the ballot" 2, "Submitting candidates not on the ballot" 3, and "Reviewing and casting your votes" 4 buttons all take the voter to detailed instructions on those topics. The fourth button, "Change screen settings" 5, leads to another hub, where voters can adjust language, text size, screen contrast, and color and turn on audio.

The background color for all Help screens changes to a darker gray to alert voters that they have left the ballot area.

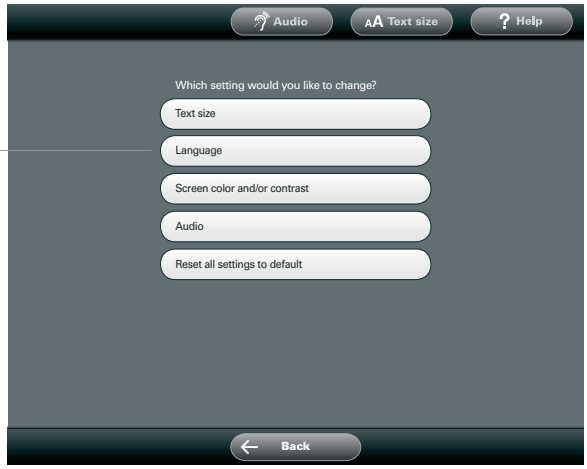
Using the ballot

Instruction screens provide detailed text instructions combined with an animation loop that highlights key features and processes.

Changing screen settings

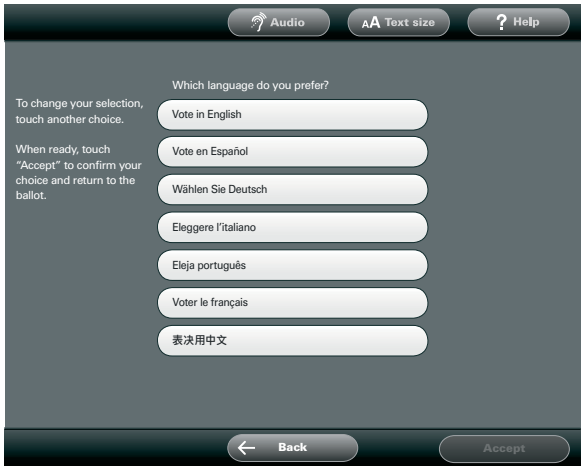


Main help screen
At the main Help screen, when voters touch the "Changing screen settings" button 1, they move to the main settings screen.

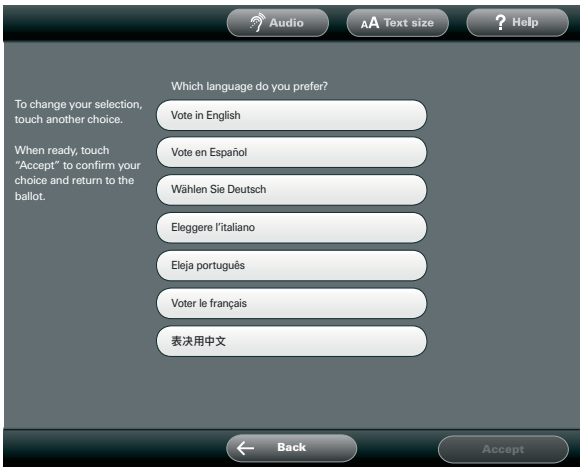


Main change screen
The settings screen serves as a hub, with five buttons: "Text size" 2; "Language" 3; "Screen color and contrast" 4; "Audio" (on/off and volume adjustment) 5; and "Return settings to default" 6.

Touching the "Languages" button moves the voter to a screen containing a list of languages as shown below.



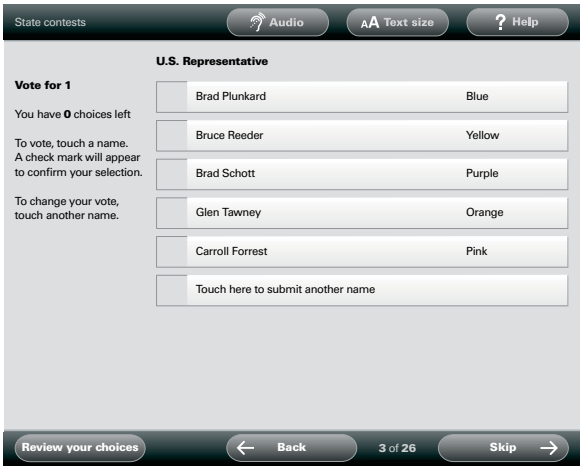
Changing screen settings, *continued*



Language settings screen
To change the language the voter is using during the voting session, the voter goes to the main change settings screen (see previous page). The voter also goes to the main change settings screen to change any other available setting—text size, contrast, or audio.

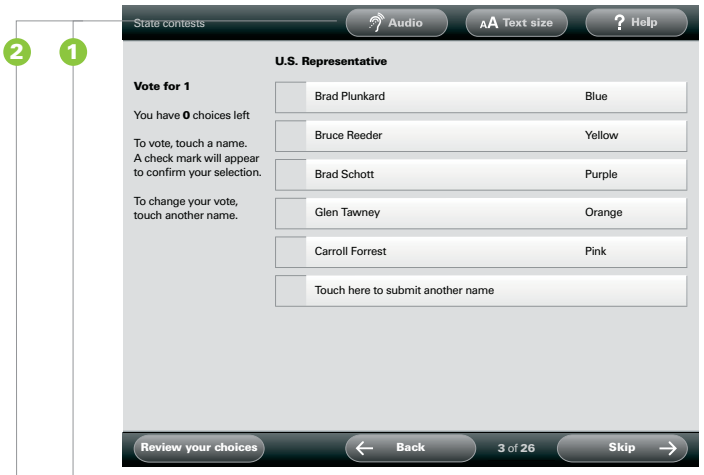
The voter chooses a language by touching the choice. The choice is highlighted and the "Accept" button changes from a dimmed state to green color.

The voter can touch a different button to switch to another language.



Touching the "Accept" button returns the voter to the previous voting screen.

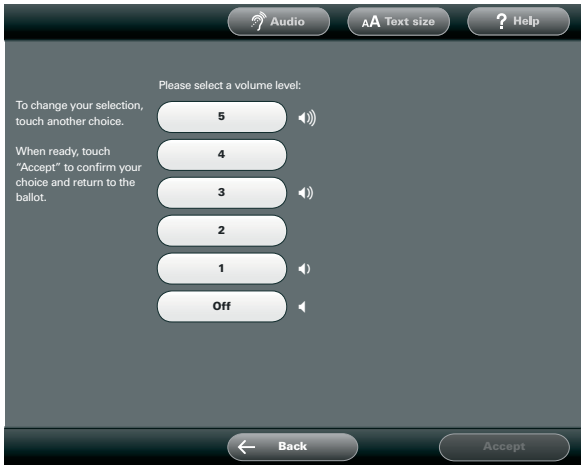
Persistent audio and text setting options



Available from every screen are two settings buttons, the "Audio" on/off and volume control 1; and the "Text size" setting button 2.

If the voter selects either of these buttons they will go directly to the appropriate settings page.

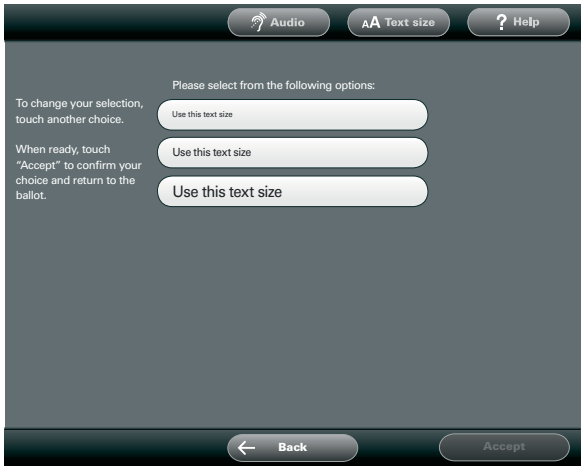
The audio settings button is not intended to replace conventional external audio setting hardware for low vision and blind voters. It is intended as a supplement for low-literacy voters or other voters who may have difficulty using a text- and graphics-only interface.



Audio settings screen
The voter is instructed to begin setting the volume by touching the "1," the lowest volume setting button. A test tone sounds and the voter can adjust the volume accordingly. The choice is highlighted and the "Accept" button changes from a dimmed state to a green color (see page 5.20).

Touching the "Accept" button returns the voter to the previous screen.

The voter can touch a different button to readjust the volume.

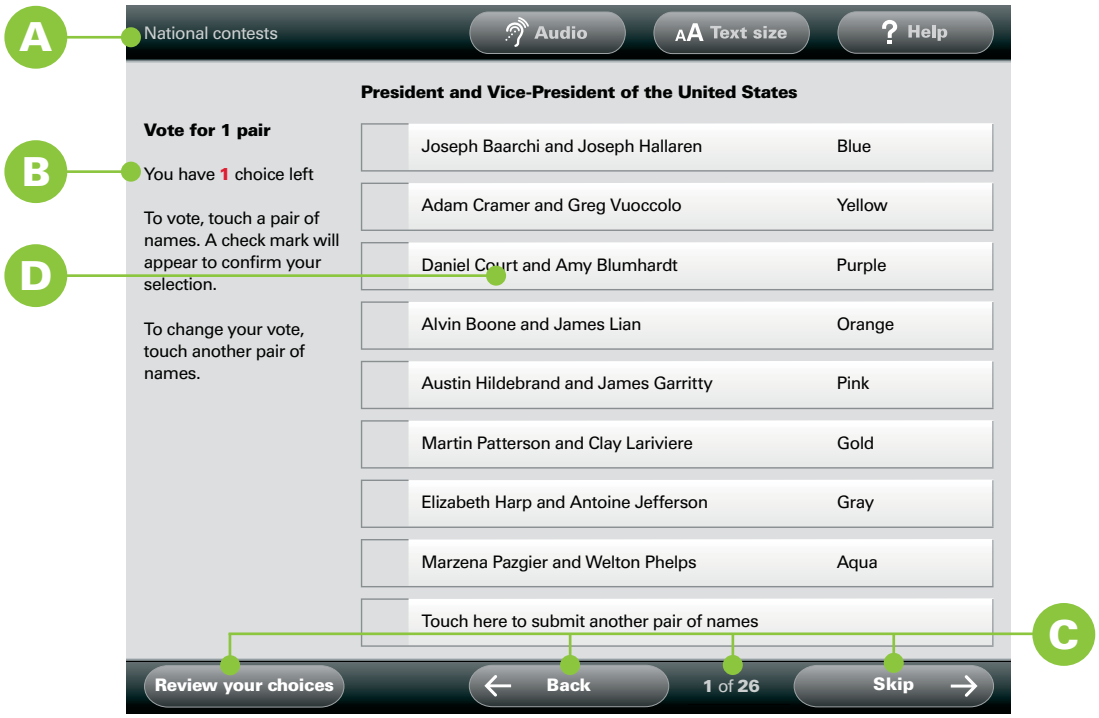


Text size settings screen
Voters are instructed to choose their preferred text size. Touching the "Accept" button returns the voter to the previous voting screen.

Design templates

The DRE ballot interface, similar to an optical scan ballot, comprises four main components:

- **A** Election information (e.g., jurisdiction, general election date).
- **B** Ballot instructions.
- **C** Ballot navigation (including "next," "back," "help," and "begin voting" buttons and screen numbers).
- **D** Content area (including contests, retentions, and ballot measures, as well as settings, review, and casting options).



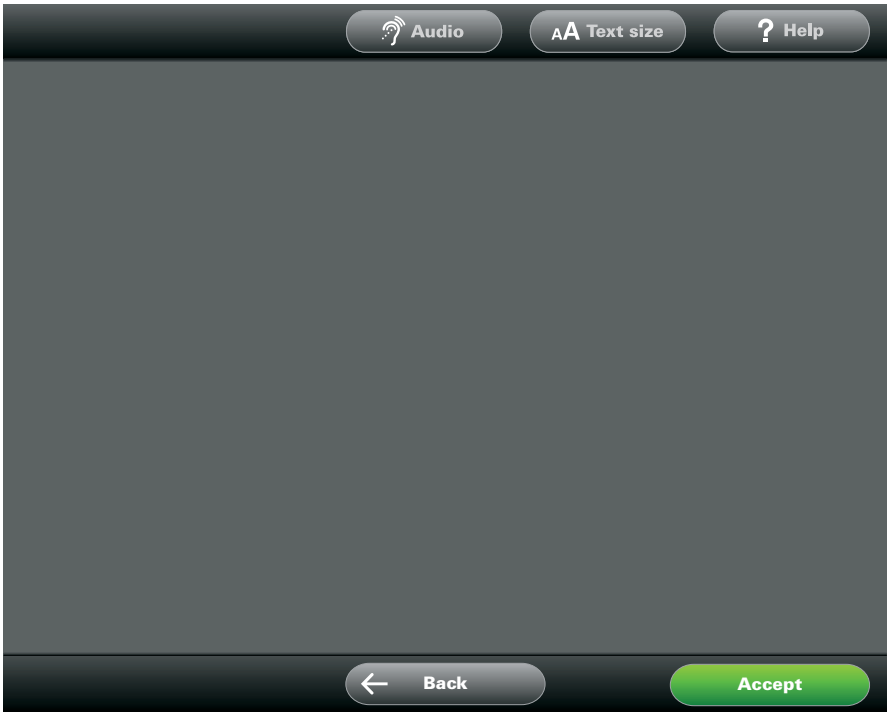
Electronic files

Electronic versions of these files are available at www.eac.gov. The files are provided in two formats: Acrobat (.pdf) and InDesign (.indd).* and are named "RollingDRE.pdf" and RollingDRE.indd."

The templates illustrate the interface design and provide guidelines for the DRE ballot produced by a vendor. As most vendor code is proprietary, this is the only way we can provide best practices.

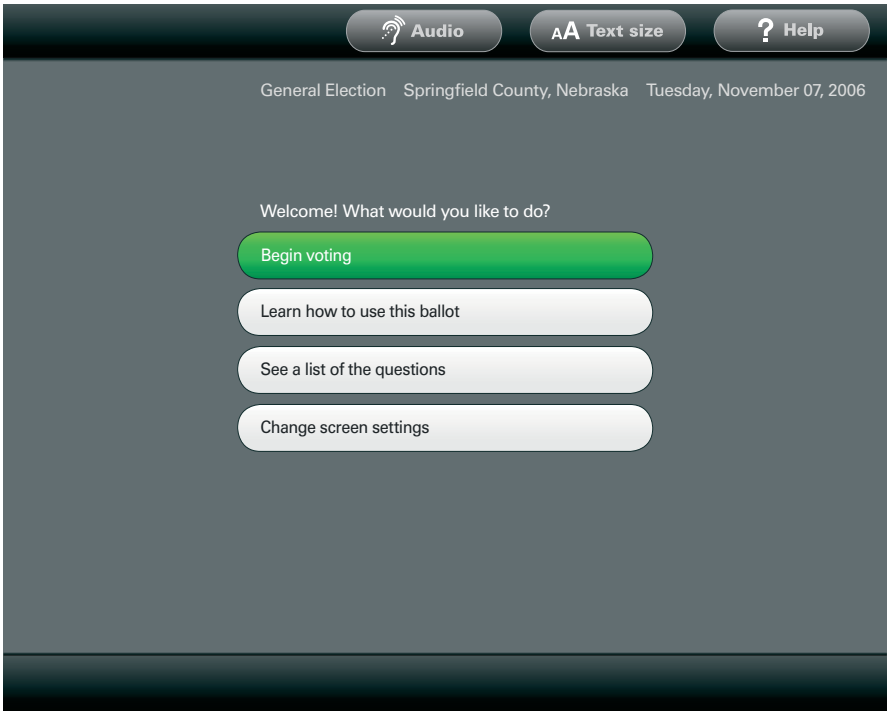
*The EAC does not endorse any specific product or vendor. The best practices illustrated throughout this document do not rely on specific software, products, or vendors. For copyright reasons, the EAC cannot supply election officials with the fonts used in the InDesign files. They are available from numerous suppliers.

Voting, Review, and Casting area background

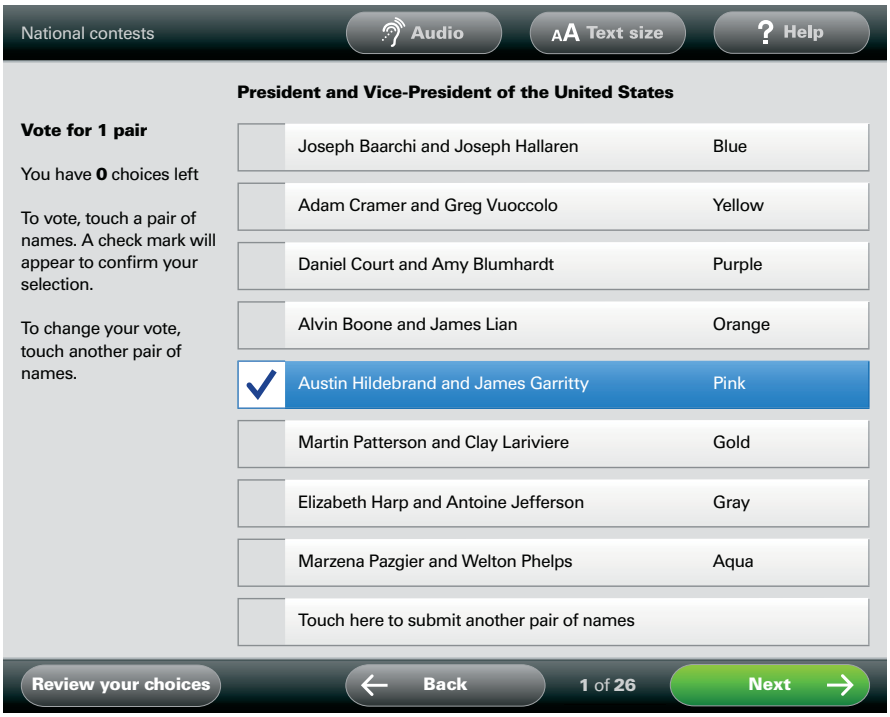


Introductory, Help, and Settings background

Language selection screen

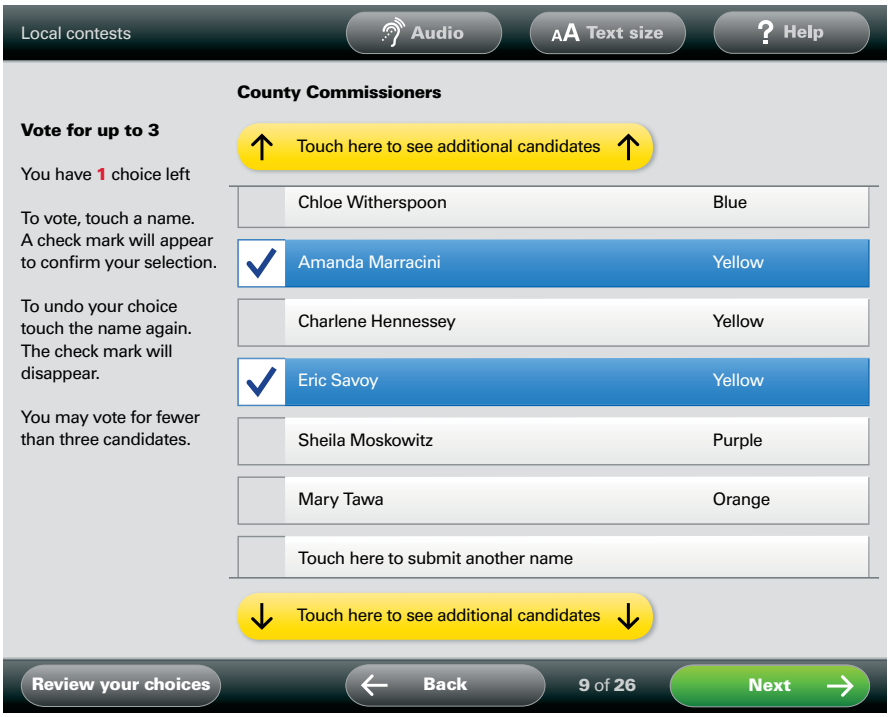


Welcome screen

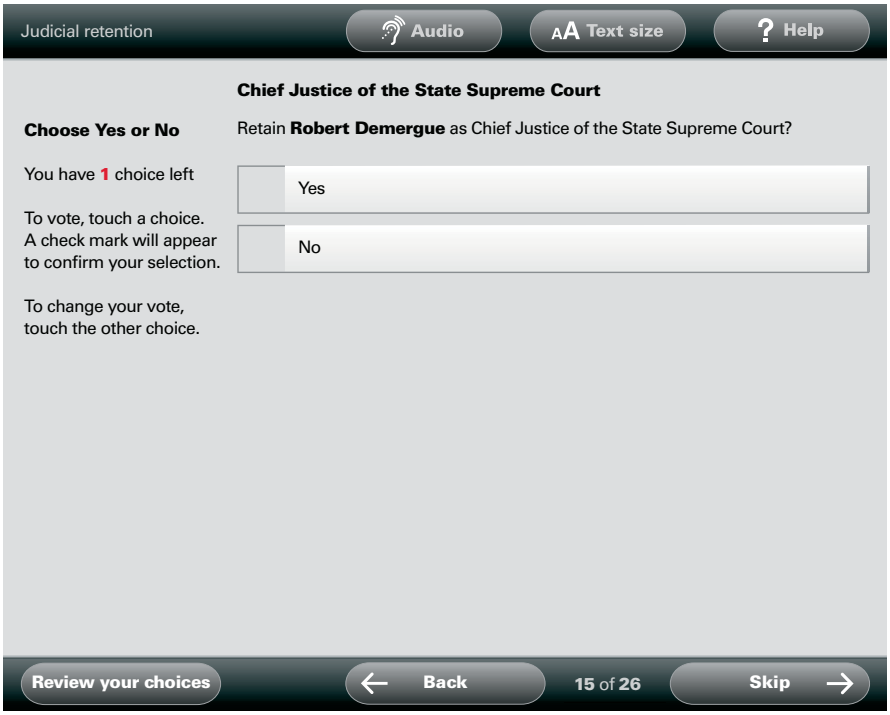


Contest screen, single selection

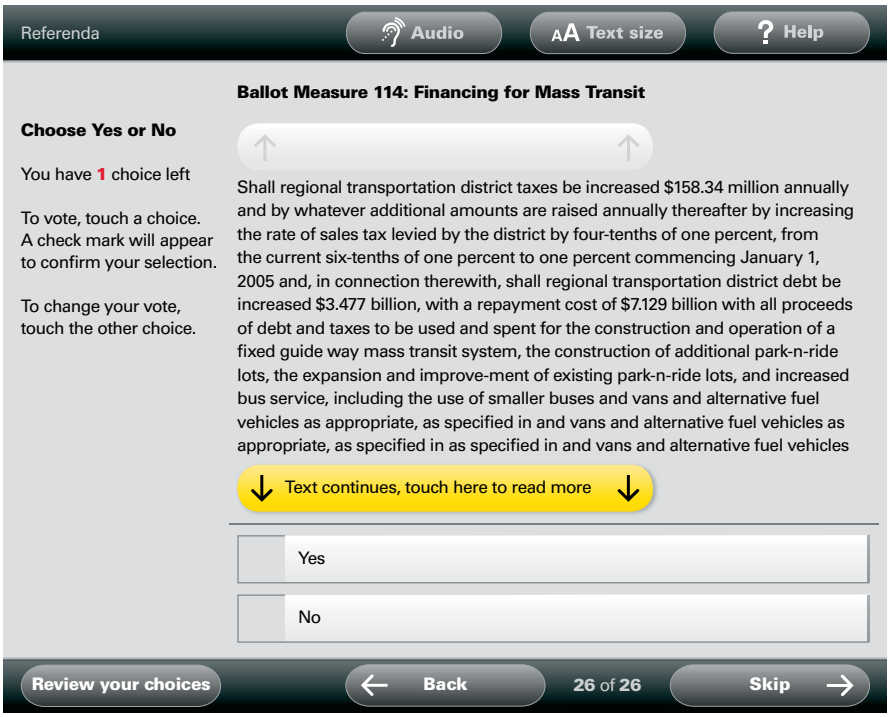
"Write-in" screen, single selection



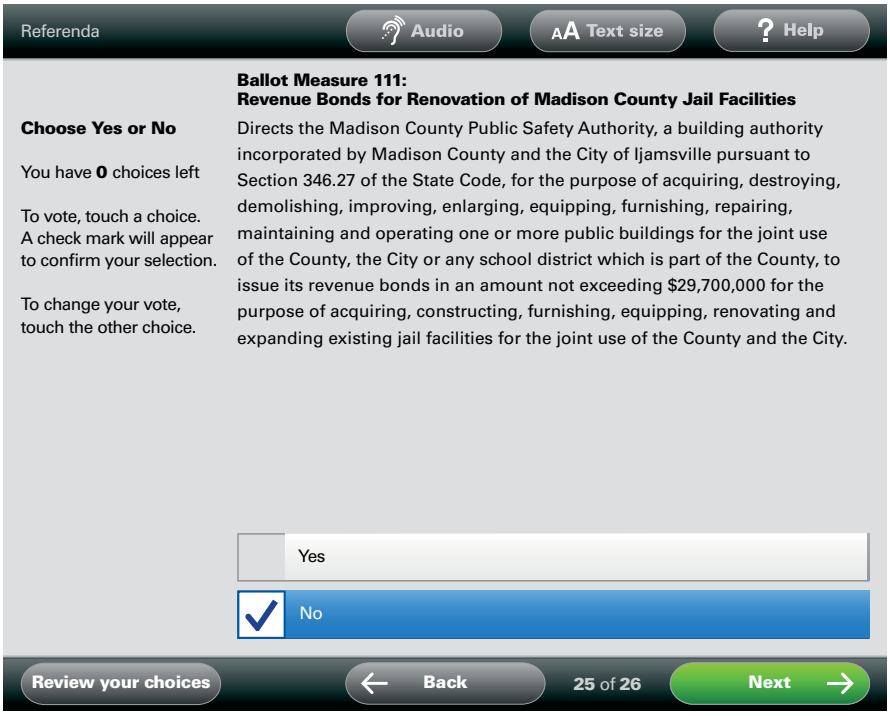
Contest screen, multiple selections with scrolling



Judicial retention screen



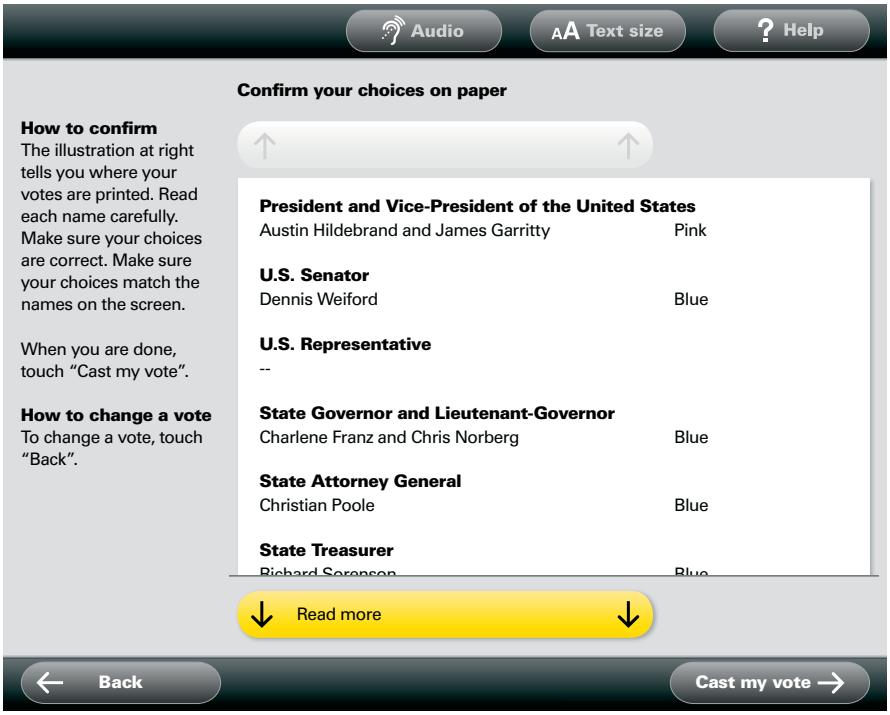
Ballot measures screen, with scrolling

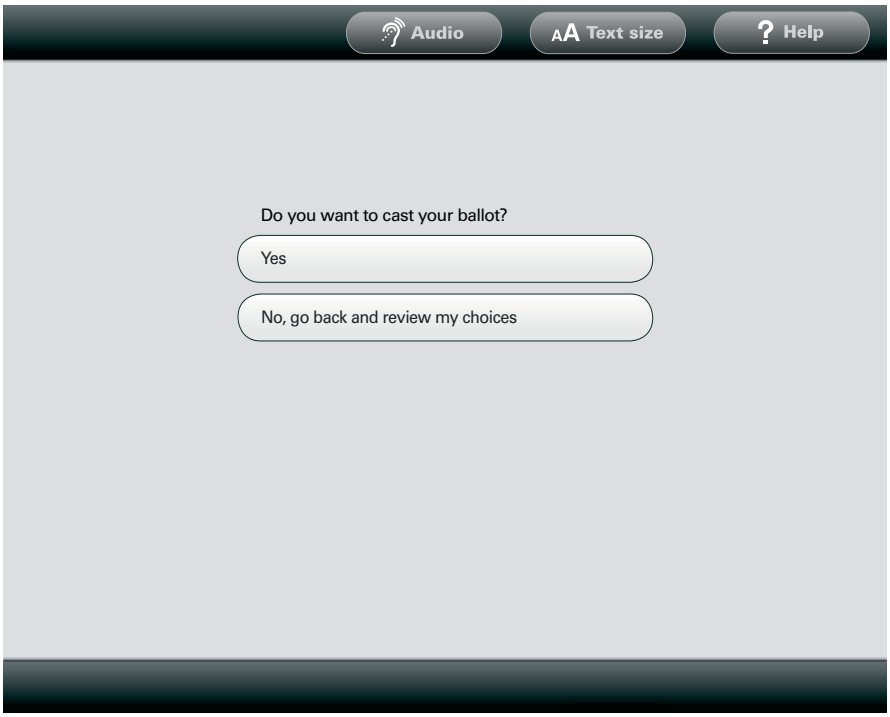


Ballot measures screen, no scrolling

Review screen

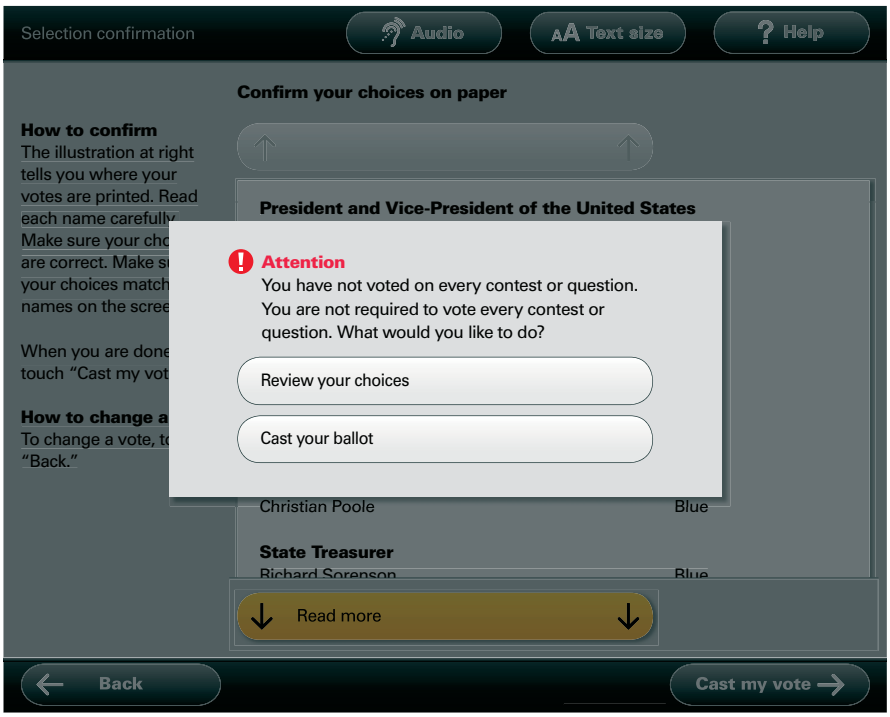
Confirmation screen



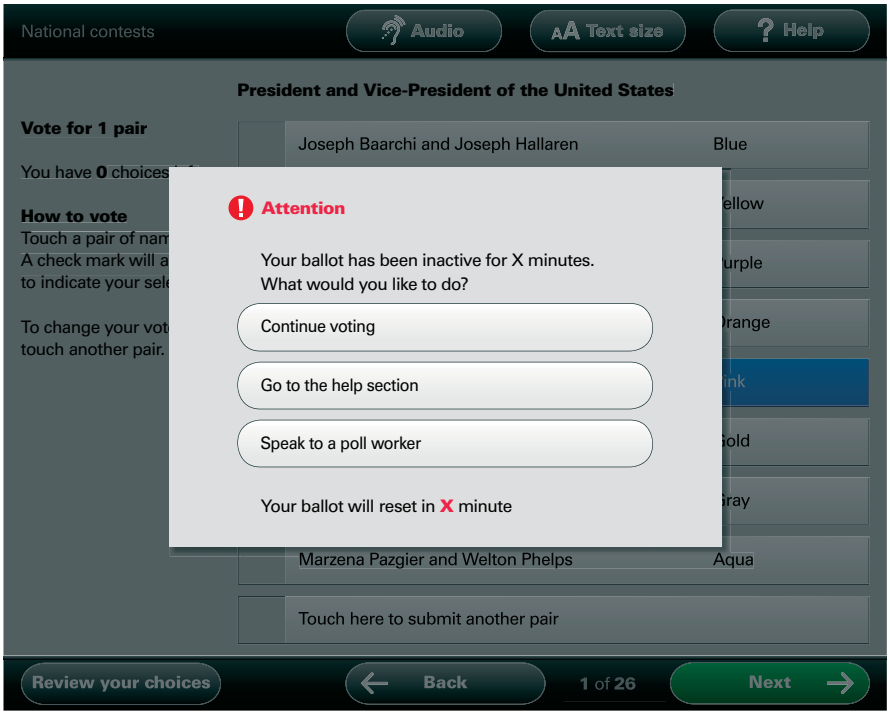


Casting query screen

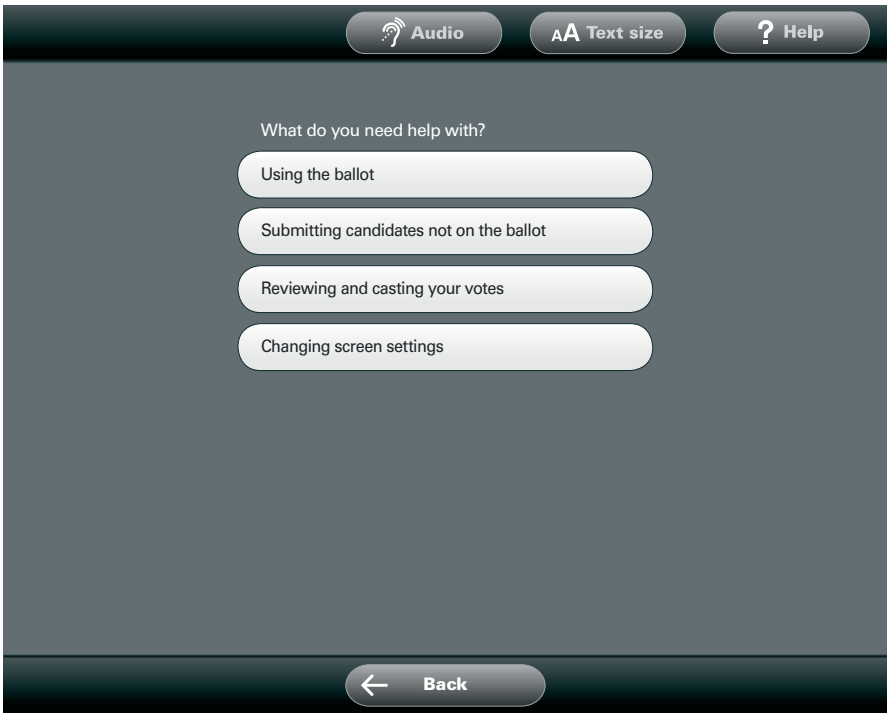
Thank you for voting! screen



Undervoting alert screen

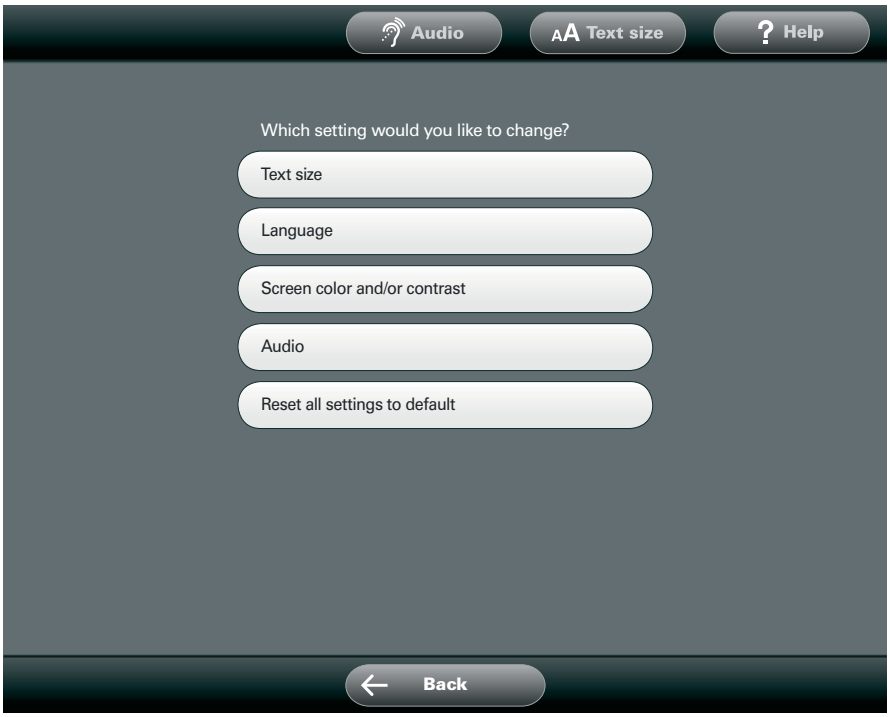


Inactive alert screen

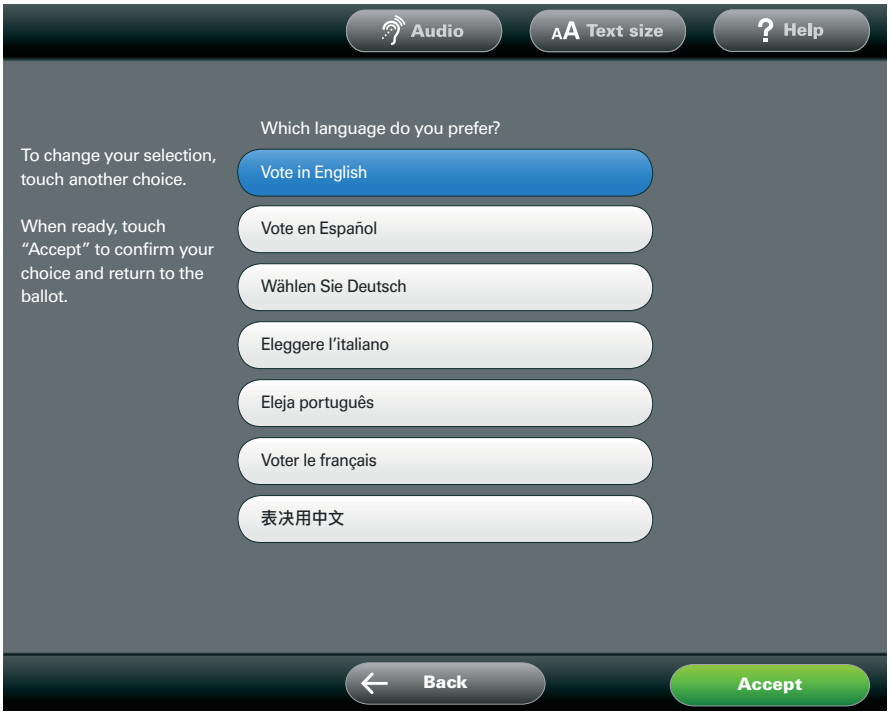


Main help screen

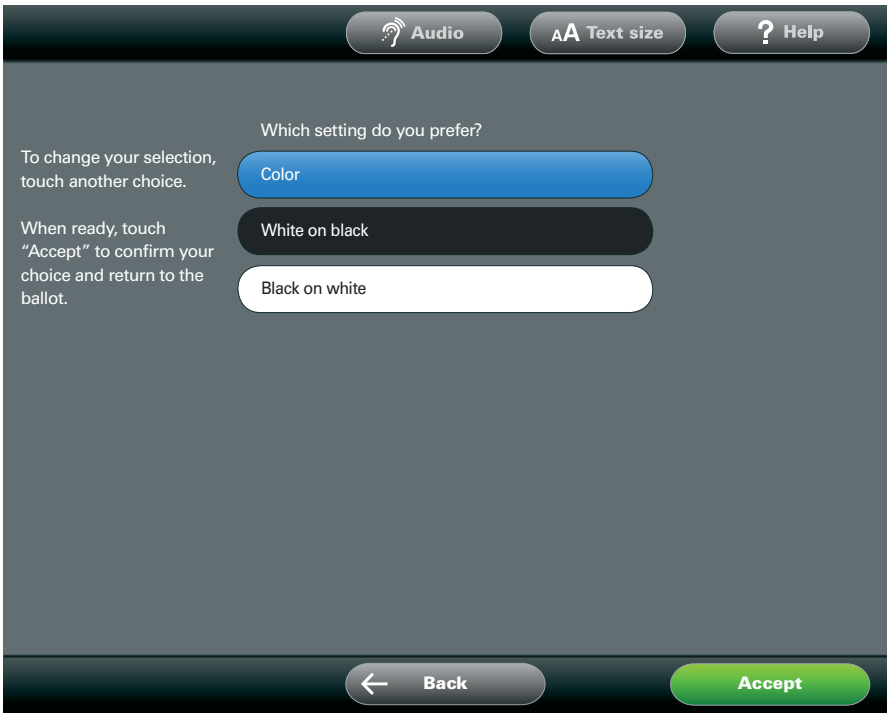
Help screen: using the ballot



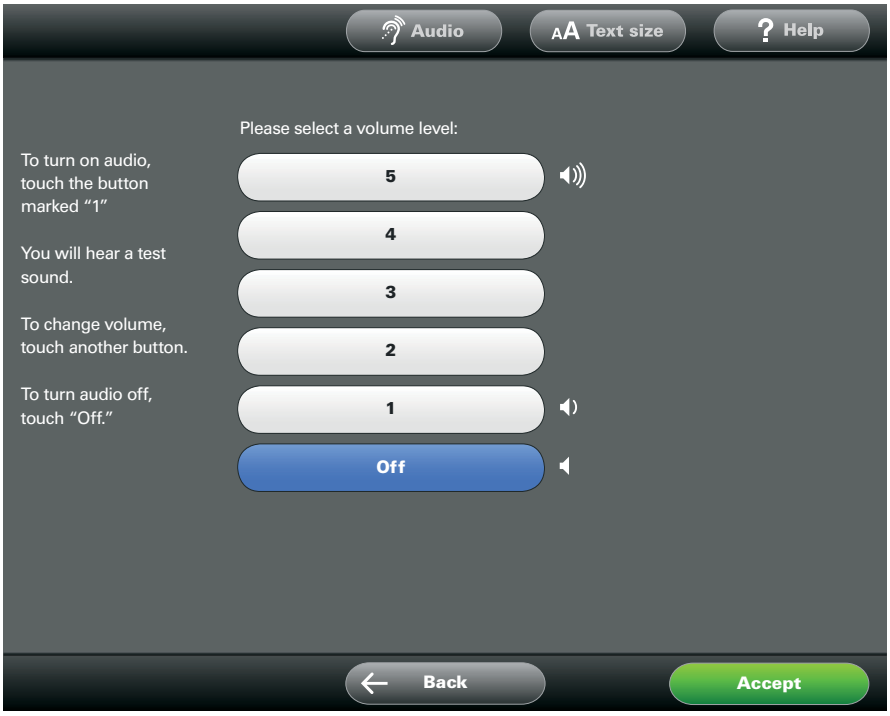
Main settings screen



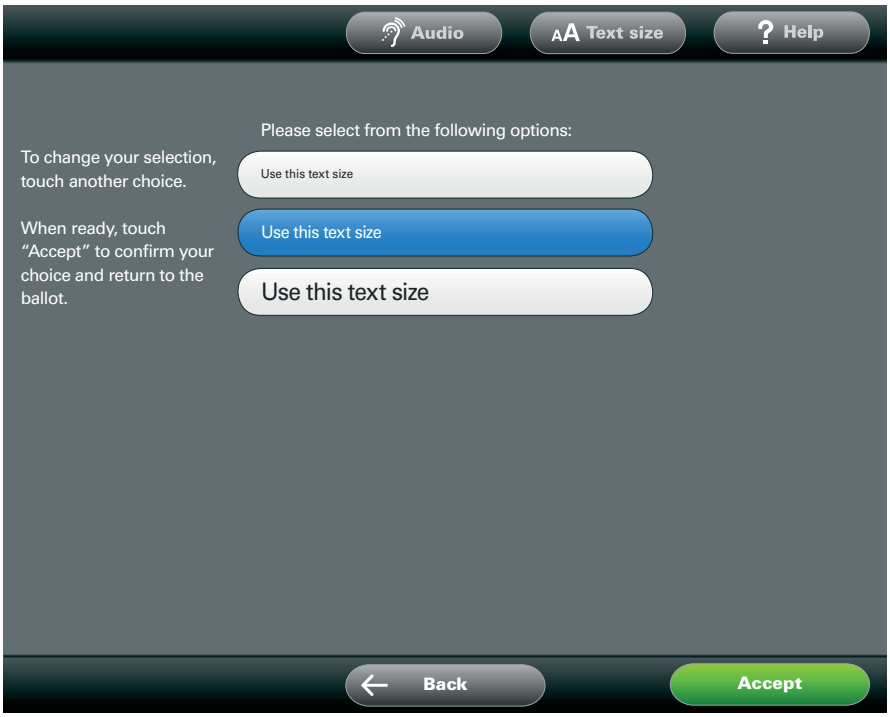
Changing languages screen



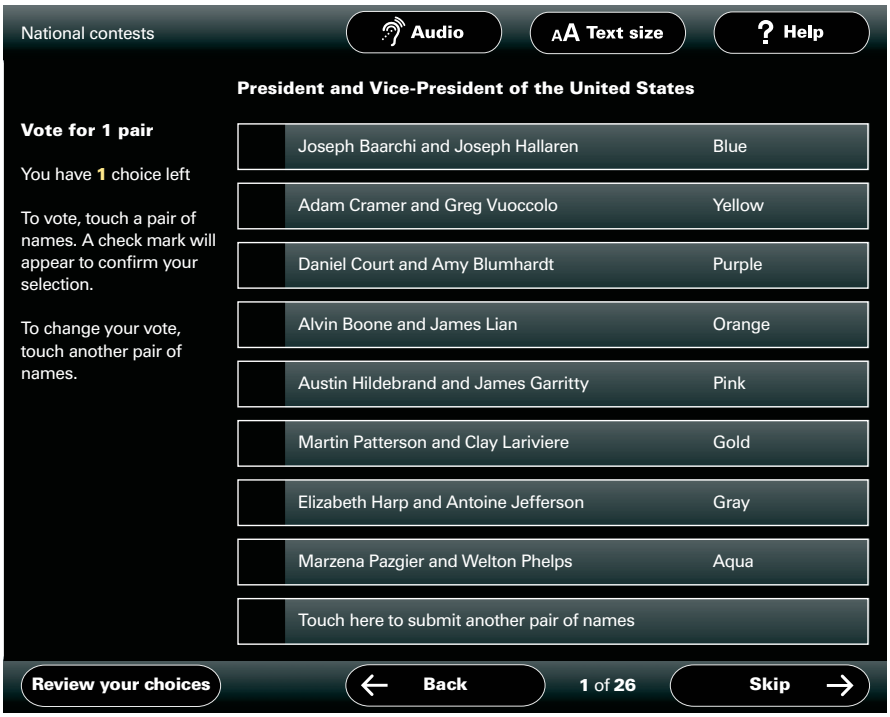
Changing contrast and color screen



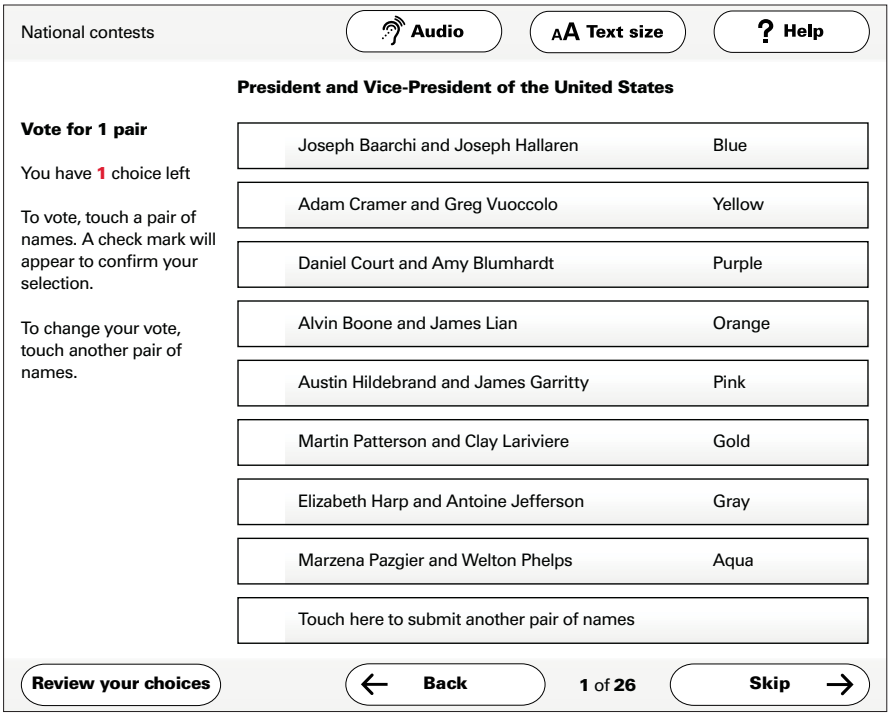
Turning audio on/off, adjusting volume screen



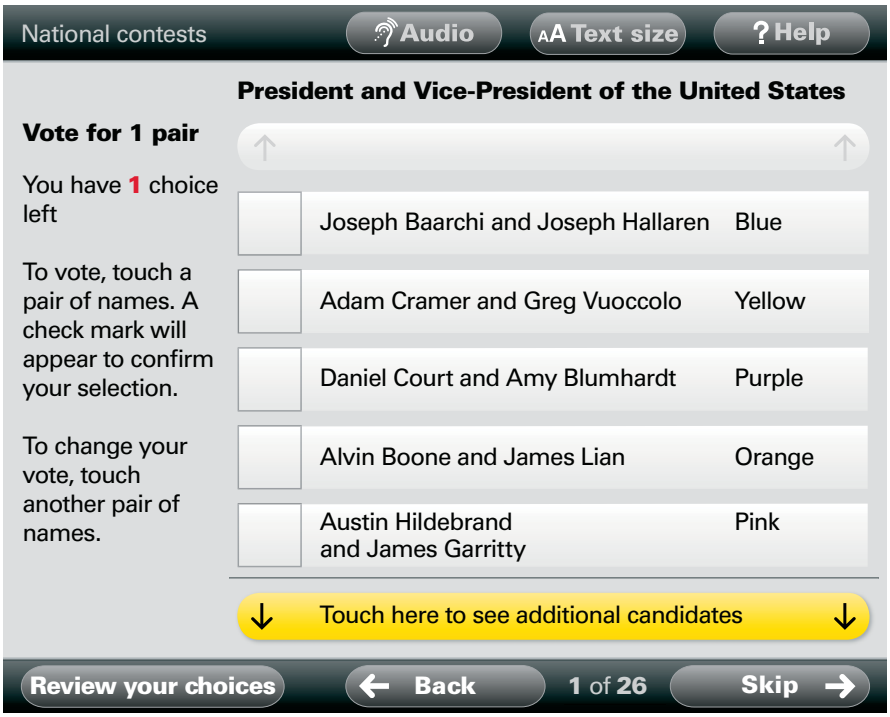
Changing text size screen



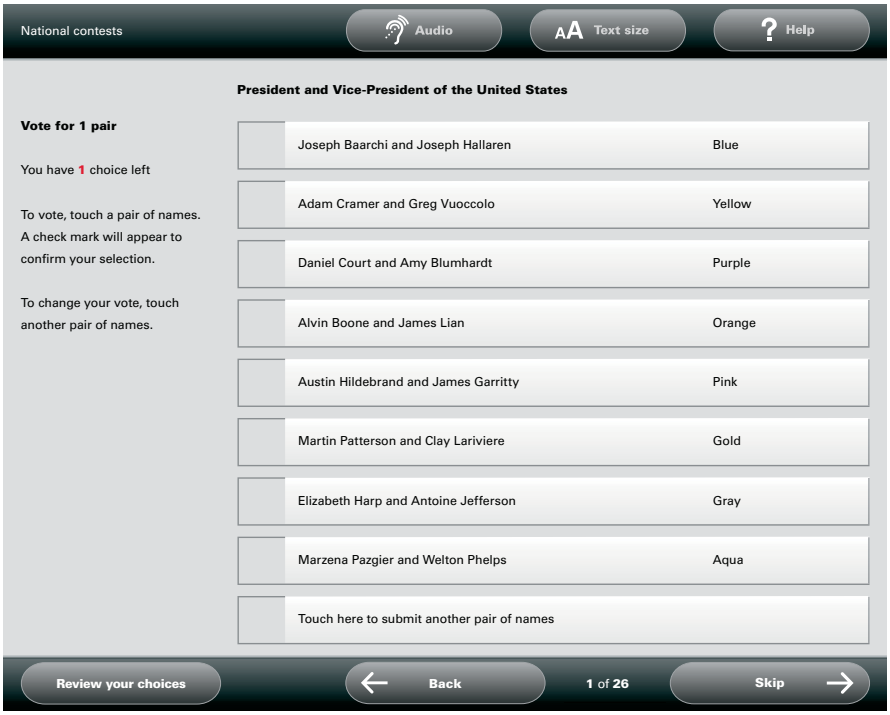
High contrast white-on-black screen



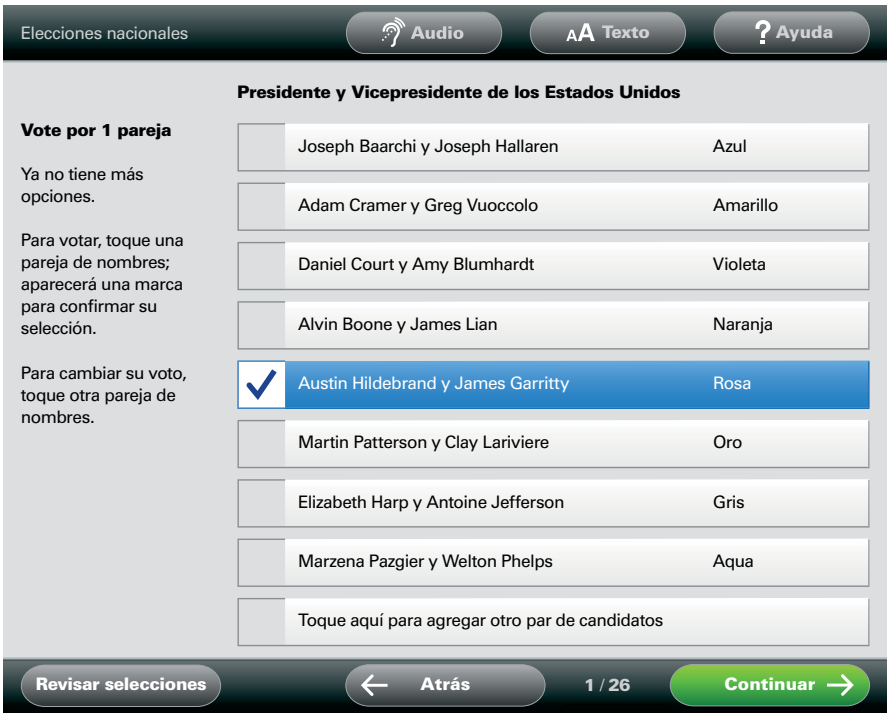
High contrast black-on-white screen



Larger text setting screen



Smaller text setting screen



Typical Spanish-language contest screen

Typical Chinese-language contest screen

Effective Designs for the Administration of Federal Elections

Section 6: Research report: Nebraska pilot test

June 2007

U.S. Election Assistance Commission

Nebraska pilot test overview

Preparing for an election can be a challenging, complicated process for election officials. Production cycles are organized around state-mandated deadlines that often leave narrow windows for successful content development, certification, translations, and election design activities. By keeping election schedules tightly controlled and making uniform voting technology decisions for local jurisdictions, States aspire to error-free elections. Unfortunately, current practices rarely include time or consideration for user-centered design development to address the basic usability needs of voters.

As a part of this research effort, a pilot study was conducted using professionally designed voter information materials and optical scan ballots in two Nebraska counties on Election Day, November 7, 2006. A research contractor partnered with Nebraska's Secretary of State's Office and their vendor, Elections Systems and Software (ES&S), to prepare redesigned materials for Colfax County and Cedar County (Lancaster County, originally included, opted out of participation). The goal was to gauge overall design success with voters and collaborate with experienced professionals within an actual production cycle with all its variables, time lines, and participants.

This case study reports the results of voter feedback on election materials, observations, and interviews from Election Day, and insights from a three-way attempt to utilize best practice design conventions. Data gathered in this study informs the final optical scan ballot and voter information specifications in sections 2 and 3 of the best practices documentation.

Pilot study goals

Pilot test goals were identified within the following three categories:

Gain empirical knowledge of an elections production process

— Understand production relationships between Nebraska officials and ES&S.
— Understand legislated requirements and time lines in Nebraska affecting election design.
— Understand how to successfully implement the professionally designed optical scan ballot and voter information guidelines.
— Review historic election materials and processes.

Study the effectiveness of implemented guidelines on Election Day

— Observe the success of designed materials in multiple polling environments.
— Discuss materials with poll workers, voters, and officials for qualitative feedback.

Analyze results and feedback

— Compare current and historic election results to gauge design influence on voting success.
— Compare final Colfax County and Cedar County ballots.
— Compare final ballot designs against proposed design conventions.
— Analyze success of voter information materials.
— Analyze observation data.

Event goals

All research events (listed in section 7), including this case study, support activities guided by these core objectives:

Clarify election official, poll worker, and voter requirements in the following areas:

- *Usable:* Tasks can be accomplished efficiently, accurately, and easily.
- *Accessible:* Materials are usable by people with disabilities.
- *Language:* English and non-English reading options are clear and understandable.
- *Legible:* Typewritten characters and paragraphs are easily read.
- *Readable:* Ideas presented are clear and easily understood.
- *Learnable:* Tools, skills, and new concepts are easily mastered.
- *Credible:* The voting process is authentic, capable, and trustworthy.

Clarify legislative requirements at State and county levels.

Clarify nonlegislative requirements.

Clarify production requirements:

- *Scalable:* Adjustments in content quantities are easily handled.
- *Flexible:* Adjustments to changing conditions are easily handled.
- *Reusable:* Re-creations are easy and effective.

Clarify existing election official and vendor practices.

Methodology

To achieve pilot test goals, the following qualitative research methods were used:

- Observations of Election Day materials and activities, from preproduction to the close of polls.
- Field interviews with poll workers, voters, and election officials.
- Reviews of historic election materials from Colfax County and Cedar County.

Production timeline

The table below provides an overview of research, design, and production activities in partnership with election officials and Nebraska's ballot vendor, ES&S, leading up to the 2006 general election. All tasks supported State-regulated deadlines (shown in gray) as well as production requirements and deadlines communicated to officials by ES&S.

Date	Activity/deadline	Notes
August 1–31	Colfax and Cedar counties identified for pilot study participation by the secretary of state's office.	Lancaster County was engaged early in the process but dropped out because a key staff member left at the beginning of the process. The county decided that a new ballot production process and new staff would pose too many variables to serve voters efficiently and with adequate assurance of success.
August 1–31	Ballot design work based on counties' draft election content begins.	Counties provided draft ballot content for initial layout. County clerks showed a clear understanding that previous ballots had significant room for improvement, and enthusiastically accepted a wide range of ballot design changes.
August 1–31	Clerks in Cedar and Colfax counties approve final ballot designs, which are delivered to ES&S for initial production.	Ballot designs approved by county clerks were developed based on significant previous research and usability testing.
September 15	The secretary of state certifies ballot content.	
September 15–22	ES&S and county officials provide onsite and phone support to incorporate design best practices into final ballots.	Major hurdles included vendor's proprietary ballot design software and file formats. Also, the software was not developed to accommodate major design changes, so many recommended best practices were difficult or impossible to implement.
September 16	Secretary of state provides Spanish translations for Colfax County ballots.	The official Nebraska election calendar did not include requirements for translations necessary in Colfax county (currently the only county in the state required to offer a second language on the ballot).
September 22	Registered absentee voters are sent ballots for early voting.	
October 1	ES&S completes ballot production.	Final ballots varied significantly from design best practices—including recommended fonts, leading, spacing between vote mark and candidate name, shaded fills to differentiate voting instructions, and referendum layout.
October 16–20	Field visits to polling locations in both counties.	Election officials interviewed, ballot preparations observed, poll locations analyzed for voter information strategy.

October 1–31	Voter information materials in English and Spanish designed.	Nebraska's secretary of state provides voter information materials previously used and approved by legislation. Materials were reviewed and edited by simple language experts before initial layout began.
October 15–31	Simple language experts review draft voter information materials.	
October 2	State deadline to publish/post notice of elections.	
October 22–November 4	State publishes sample ballots in newspapers.	
October 27	State deadline for posting sample ballots in county offices.	
November 1	State deadline to mail early ballots.	
November 3	State deadline to distribute sample ballots to county, city, or village.	
November 5	Voter information materials produced.	Materials printed on vinyl from e-mailed digital files.
November 6	Participation in poll worker training in Colfax County and distribute voter information materials in Cedar and Colfax counties.	Walk-through of all voter information materials with county poll workers prior to Election Day.
November 7	Election Day.	Cedar County printed their own ballots on a laser printer with ES&S-supplied paper and ES&S shipped printed ballots to Colfax County.

Findings

Production process relationships

— Local officials had modest control over service, costs, and quality in their State-sponsored vendor contracts.

— Counties competed with one another for vendor resources to accomplish identical goals under identical state election deadlines. During the ballot design and production phase, pilot test personnel temporarily shared this management responsibility with officials so that the proposed best practices could be implemented to their fullest extent.

— The Nebraska secretary of state's office had strong working relationships with pilot test personnel, ES&S, and the Cedar and Colfax county clerks. As an executive sponsor, the deputy of elections raised the visibility and credibility of the project and facilitated decision making. Pilot test personnel offered weekly, and sometimes daily, guidance and feedback to ES&S on local ballot layout, as well as suggestions for quality services (e.g., translations) that would advance the ballot design used in the general election.

Legislative requirements

— Nebraska's legislative time line allows only 2 weeks for ballot design and production between content certification and absentee voting deadlines for all ballot variations (splits) in each jurisdiction.

— Nebraska law mandates the use of italicized text in referendums, which undermines ballot legibility as well as the core typographic value of italics (which should be used on a limited basis for emphasis).

— Language used to describe statewide issues in the ballots is simplified from the "official" descriptions offered in newspapers and on record, but it still poses a challenge for many voters.

Implementing best practices

— ES&S and officials were enthusiastic about incorporating best practices but did not prioritize their execution.

— Colfax County's bilingual ballot layout deviated from recommended best practices, which called for a vertical layout with English in one column and Spanish side-by-side in the next column. Instead, the Colfax County ballot displayed an English paragraph followed by the translated Spanish paragraph, which made it difficult to read in either language.

— Cedar County's ballot colors did not conform to design best practices when produced on an ES&S laser printer.

Ballot comparison

— For a complete comparison among the previous, proposed, and implemented ballots in Cedar and Colfax counties, see pages 6.8–6.14.

Election day observations

— Voters did not notice a significant difference between pilot study ballots and those used in the past in their jurisdictions.

— Voters had few problems with ballots, and the chief complaint was ballot measure language.

— Poll workers in Colfax County supported a new, coherent voter information system.

— On Election Day, placement of voter information posters was limited to available wall space in polling places. This often reduced voters' ability to see and use the information.

— Few voters noticed the voter information materials, and few poll workers directed voters to them. Poll workers generally answered voters' questions themselves.

— When voters were directed to the information materials, voters and poll workers agreed on their value.

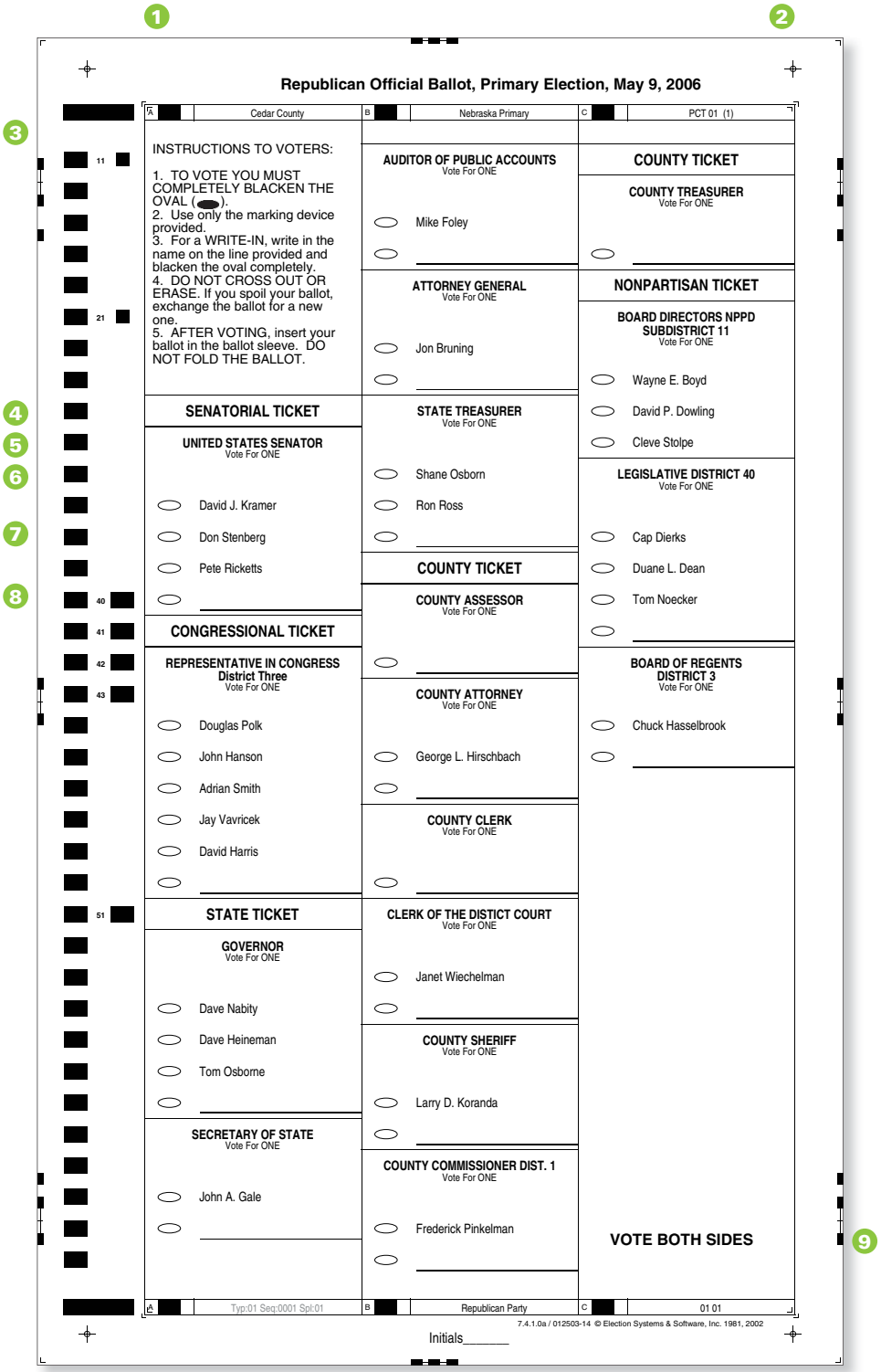
— Some voters were reluctant to request help from poll workers. Some asked other (sometimes active) voters for assistance instead.

— For voter information materials to be effective, they must be placed where voters will see them and can read them.

— Poster formats alone do not meet the needs of all polling precincts. In-booth and tabletop versions of the materials may be necessary.

Cedar County Ballot, May 2006

Primary election ballot from May 9, 2006. Significant differences from the redesigned ballot (page 6.9) are numbered below and annotated on page 6.14.



Republican Official Ballot, Primary Election, May 9, 2006

A Cedar County | B Nebraska Primary | C PCT 01 (1)

INSTRUCTIONS TO VOTERS:

1. TO VOTE YOU MUST COMPLETELY BLACKEN THE OVAL ( ).
2. Use only the marking device provided.
3. For a WRITE-IN, write in the name on the line provided and blacken the oval completely.
4. DO NOT CROSS OUT OR ERASE. If you spoil your ballot, exchange the ballot for a new one.
5. AFTER VOTING, insert your ballot in the ballot sleeve. DO NOT FOLD THE BALLOT.

SENATORIAL TICKET

UNITED STATES SENATOR (Vote For ONE)
- David J. Kramer
- Don Stenberg
- Pete Ricketts

CONGRESSIONAL TICKET

REPRESENTATIVE IN CONGRESS District Three (Vote For ONE)
- Douglas Polk
- John Hanson
- Adrian Smith
- Jay Vavricek
- David Harris

STATE TICKET

GOVERNOR (Vote For ONE)
- Dave Nabity
- Dave Heineman
- Tom Osborne

SECRETARY OF STATE (Vote For ONE)
- John A. Gale

AUDITOR OF PUBLIC ACCOUNTS (Vote For ONE)
- Mike Foley

ATTORNEY GENERAL (Vote For ONE)
- Jon Bruning

STATE TREASURER (Vote For ONE)
- Shane Osborn
- Ron Ross

COUNTY TICKET

COUNTY ASSESSOR (Vote For ONE)

COUNTY ATTORNEY (Vote For ONE)
- George L. Hirschbach

COUNTY CLERK (Vote For ONE)

CLERK OF THE DISTICT COURT (Vote For ONE)
- Janet Wiechelman

COUNTY SHERIFF (Vote For ONE)
- Larry D. Koranda

COUNTY COMMISSIONER DIST. 1 (Vote For ONE)
- Frederick Pinkelman

COUNTY TICKET

COUNTY TREASURER (Vote For ONE)

NONPARTISAN TICKET

BOARD DIRECTORS NPPD SUBDISTRICT 11 (Vote For ONE)
- Wayne E. Boyd
- David P. Dowling
- Cleve Stolpe

LEGISLATIVE DISTRICT 40 (Vote For ONE)
- Cap Dierks
- Duane L. Dean
- Tom Noecker

BOARD OF REGENTS DISTRICT 3 (Vote For ONE)
- Chuck Hasselbrook

VOTE BOTH SIDES

A Typ:01 Seq:0001 Spl:01 | B Republican Party | C 01 01

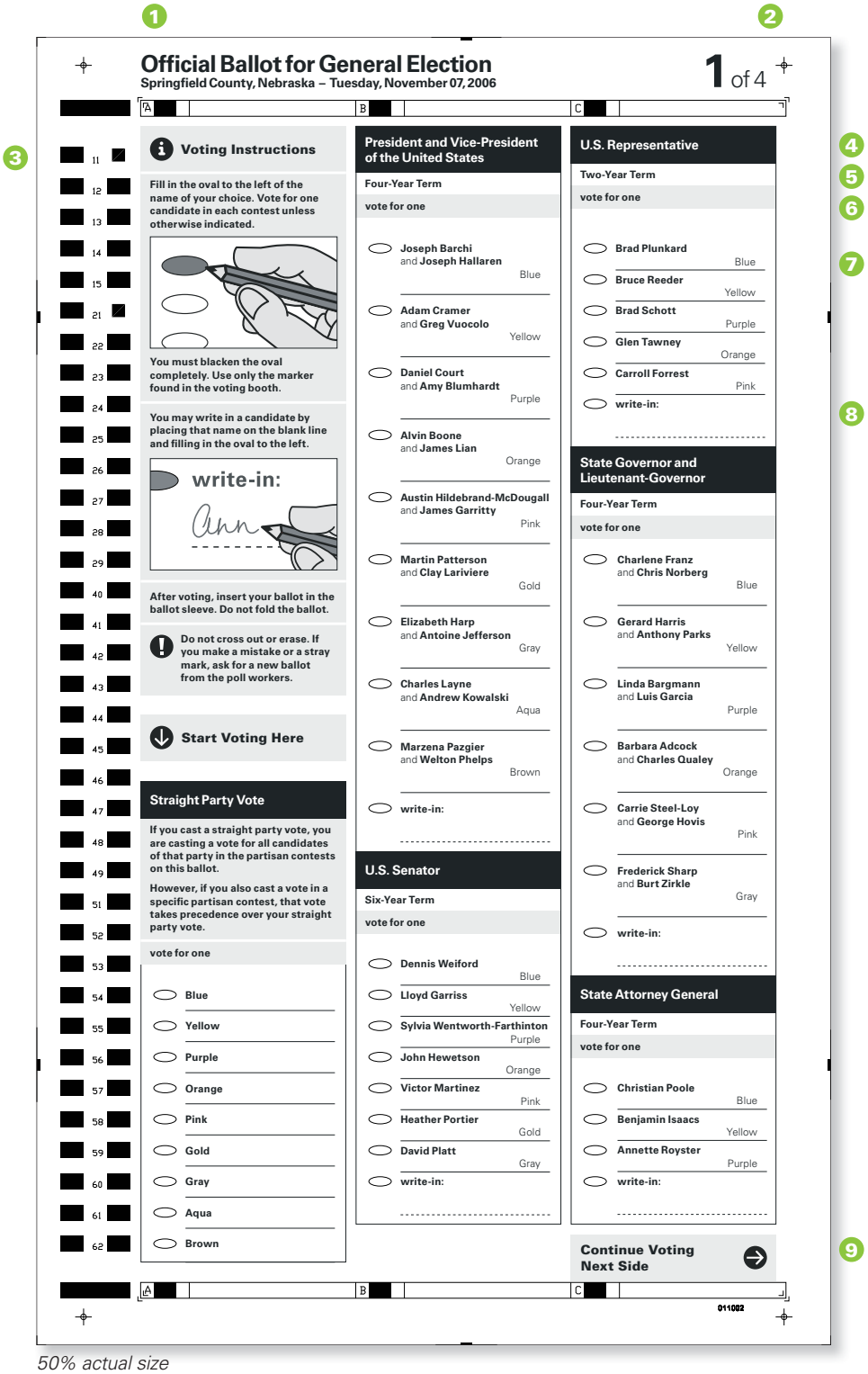
7.4.1.0a / 012503-14 © Election Systems & Software, Inc. 1981, 2002

Initials_____

50% actual size

Cedar County recommended best practices, November 2006

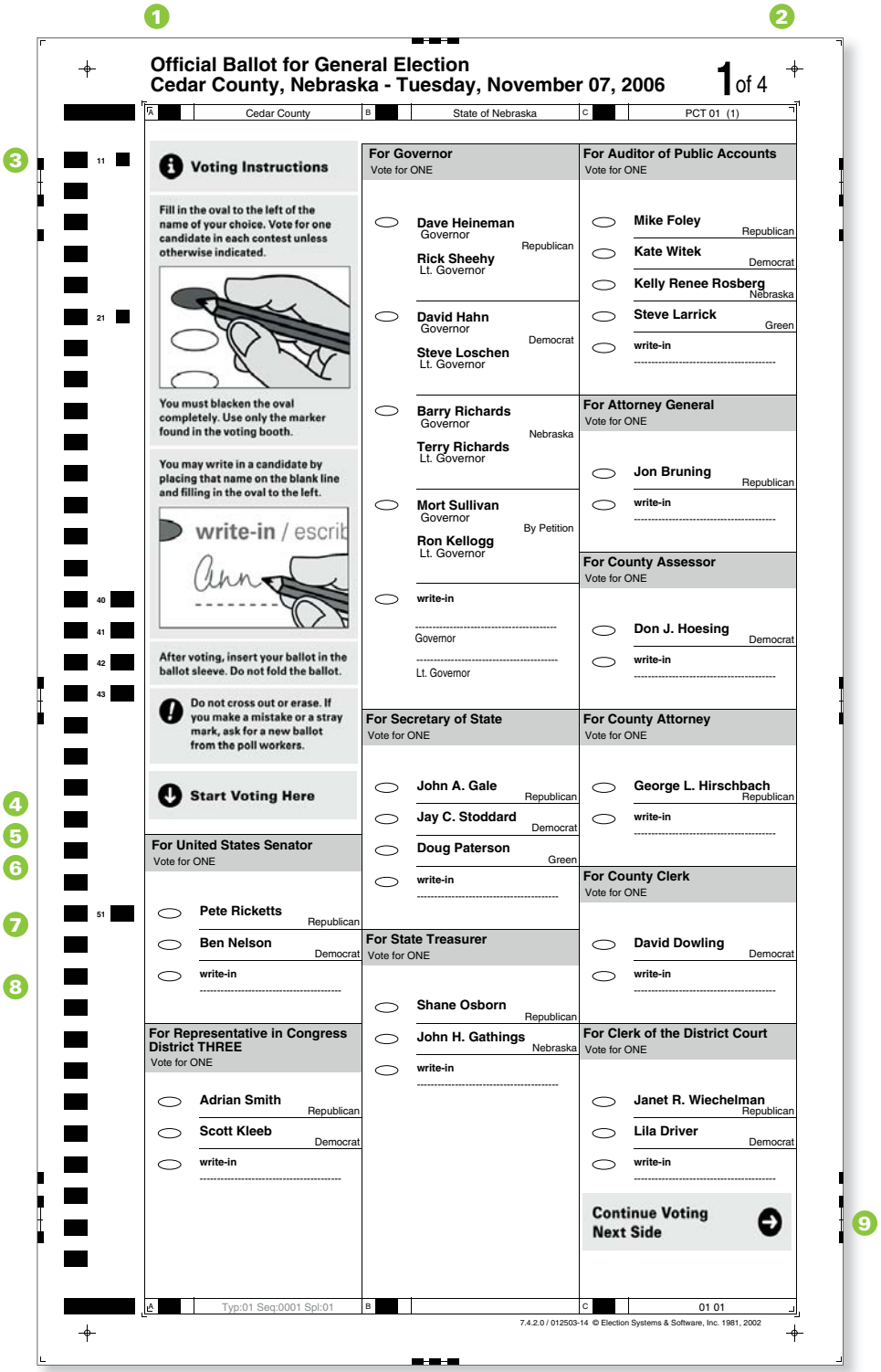
Proposed general election ballot displaying the recommended design best practices. This ballot uses sample content originally developed by the National Institute of Standards and Technology (NIST). This design was approved by the county clerk before production by the ballot vendor. Significant differences from the May 2006 ballot (page 6.8) are numbered below and annotated on page 6.14.



50% actual size

Cedar County Ballot, November 2006

General election ballot based on partial application of new design standards. Significant differences from the proposed ballot design (page 6.9) are numbered below and annotated on page 6.14.



Official Ballot for General Election
Cedar County, Nebraska - Tuesday, November 07, 2006

1 of 4

A Cedar County | B State of Nebraska | C PCT 01 (1)

Voting Instructions

Fill in the oval to the left of the name of your choice. Vote for one candidate in each contest unless otherwise indicated.

You must blacken the oval completely. Use only the marker found in the voting booth.

You may write in a candidate by placing that name on the blank line and filling in the oval to the left.

After voting, insert your ballot in the ballot sleeve. Do not fold the ballot.

Do not cross out or erase. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.

Start Voting Here

For United States Senator — Vote for ONE
- Pete Ricketts — Republican
- Ben Nelson — Democrat
- write-in

For Representative in Congress District THREE — Vote for ONE
- Adrian Smith — Republican
- Scott Kleeb — Democrat
- write-in

For Governor — Vote for ONE
- Dave Heineman, Governor / Rick Sheehy, Lt. Governor — Republican
- David Hahn, Governor / Steve Loschen, Lt. Governor — Democrat
- Barry Richards, Governor / Terry Richards, Lt. Governor — Nebraska
- Mort Sullivan, Governor / Ron Kellogg, Lt. Governor — By Petition
- write-in ---------- Governor ---------- Lt. Governor

For Secretary of State — Vote for ONE
- John A. Gale — Republican
- Jay C. Stoddard — Democrat
- Doug Paterson — Green
- write-in

For State Treasurer — Vote for ONE
- Shane Osborn — Republican
- John H. Gathings — Nebraska
- write-in

For Auditor of Public Accounts — Vote for ONE
- Mike Foley — Republican
- Kate Witek — Democrat
- Kelly Renee Rosberg — Nebraska
- Steve Larrick — Green
- write-in

For Attorney General — Vote for ONE
- Jon Bruning — Republican
- write-in

For County Assessor — Vote for ONE
- Don J. Hoesing — Democrat
- write-in

For County Attorney — Vote for ONE
- George L. Hirschbach — Republican
- write-in

For County Clerk — Vote for ONE
- David Dowling — Democrat
- write-in

For Clerk of the District Court — Vote for ONE
- Janet R. Wiechelman — Republican
- Lila Driver — Democrat
- write-in

Continue Voting Next Side

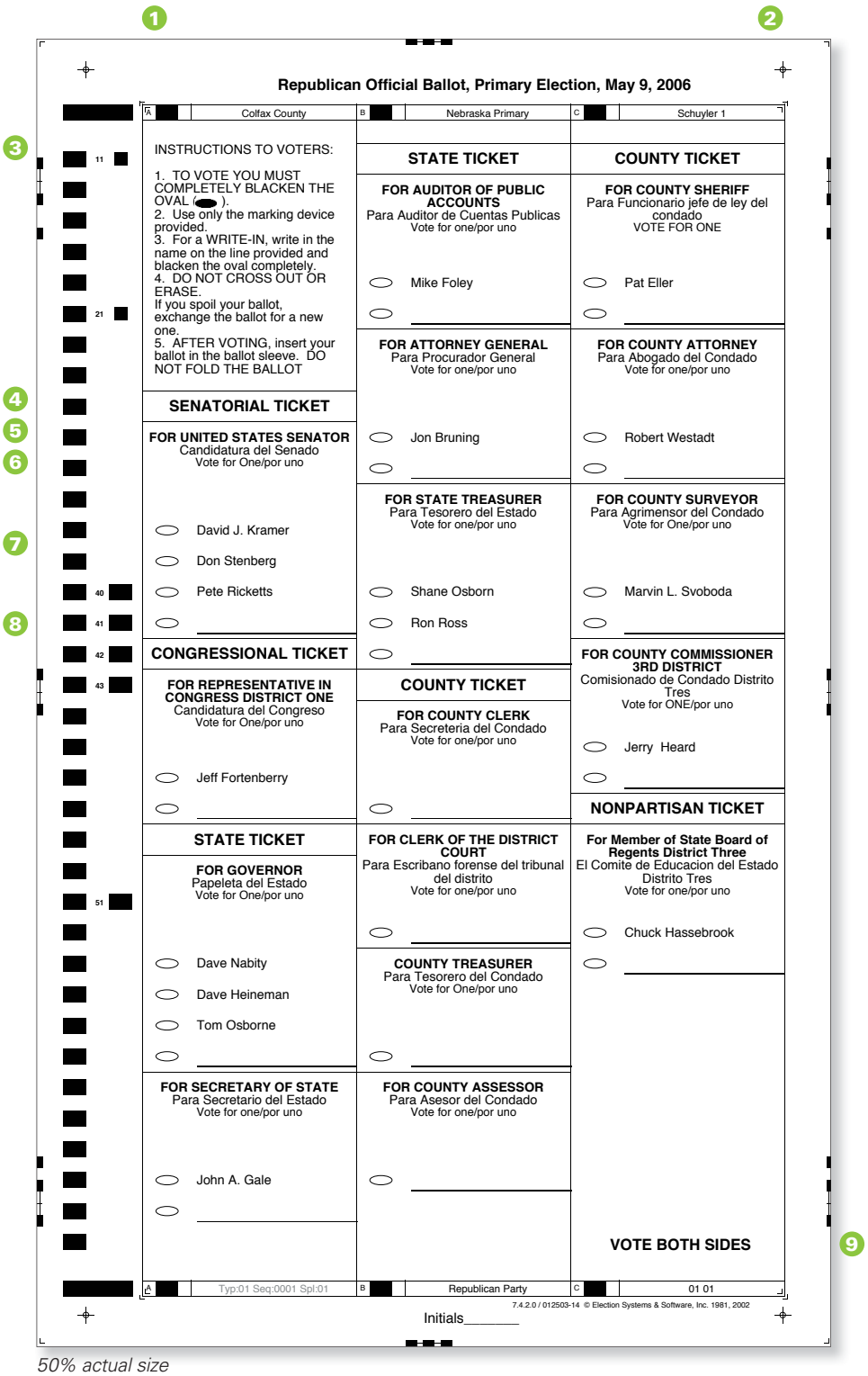
A Typ:01 Seq:0001 Spl:01 | B | C 01 01

7.4.2.0 / 012503-14 © Election Systems & Software, Inc. 1981, 2002

50% actual size

Colfax County Ballot, May 2006

Primary election ballot from May 9, 2006. Significant differences from the redesigned ballot (page 6.13) are numbered below and annotated on page 6.14.



Republican Official Ballot, Primary Election, May 9, 2006

Colfax County | Nebraska Primary | Schuyler 1

INSTRUCTIONS TO VOTERS:
1. TO VOTE YOU MUST COMPLETELY BLACKEN THE OVAL ( ).
2. Use only the marking device provided.
3. For a WRITE-IN, write in the name on the line provided and blacken the oval completely.
4. DO NOT CROSS OUT OR ERASE.
If you spoil your ballot, exchange the ballot for a new one.
5. AFTER VOTING, insert your ballot in the ballot sleeve. DO NOT FOLD THE BALLOT

SENATORIAL TICKET

FOR UNITED STATES SENATOR
Candidatura del Senado
Vote for One/por uno
- David J. Kramer
- Don Stenberg
- Pete Ricketts
- _____

CONGRESSIONAL TICKET

FOR REPRESENTATIVE IN CONGRESS DISTRICT ONE
Candidatura del Congreso
Vote for One/por uno
- Jeff Fortenberry
- _____

STATE TICKET

FOR GOVERNOR
Papeleta del Estado
Vote for One/por uno
- Dave Nabity
- Dave Heineman
- Tom Osborne
- _____

FOR SECRETARY OF STATE
Para Secretario del Estado
Vote for one/por uno
- John A. Gale
- _____

STATE TICKET

FOR AUDITOR OF PUBLIC ACCOUNTS
Para Auditor de Cuentas Publicas
Vote for one/por uno
- Mike Foley
- _____

FOR ATTORNEY GENERAL
Para Procurador General
Vote for one/por uno
- Jon Bruning
- _____

FOR STATE TREASURER
Para Tesorero del Estado
Vote for one/por uno
- Shane Osborn
- Ron Ross
- _____

COUNTY TICKET

FOR COUNTY CLERK
Para Secreteria del Condado
Vote for one/por uno
- _____

FOR CLERK OF THE DISTRICT COURT
Para Escribano forense del tribunal del distrito
Vote for one/por uno
- _____

COUNTY TREASURER
Para Tesorero del Condado
Vote for One/por uno
- _____

FOR COUNTY ASSESSOR
Para Asesor del Condado
Vote for one/por uno
- _____

COUNTY TICKET

FOR COUNTY SHERIFF
Para Funcionario jefe de ley del condado
VOTE FOR ONE
- Pat Eller
- _____

FOR COUNTY ATTORNEY
Para Abogado del Condado
Vote for one/por uno
- Robert Westadt
- _____

FOR COUNTY SURVEYOR
Para Agrimensor del Condado
Vote for One/por uno
- Marvin L. Svoboda
- _____

FOR COUNTY COMMISSIONER 3RD DISTRICT
Comisionado de Condado Distrito Tres
Vote for ONE/por uno
- Jerry Heard
- _____

NONPARTISAN TICKET

For Member of State Board of Regents District Three
El Comite de Educacion del Estado Distrito Tres
Vote for one/por uno
- Chuck Hassebrook
- _____

VOTE BOTH SIDES

Typ:01 Seq:0001 Spl:01 | Republican Party | 01 01

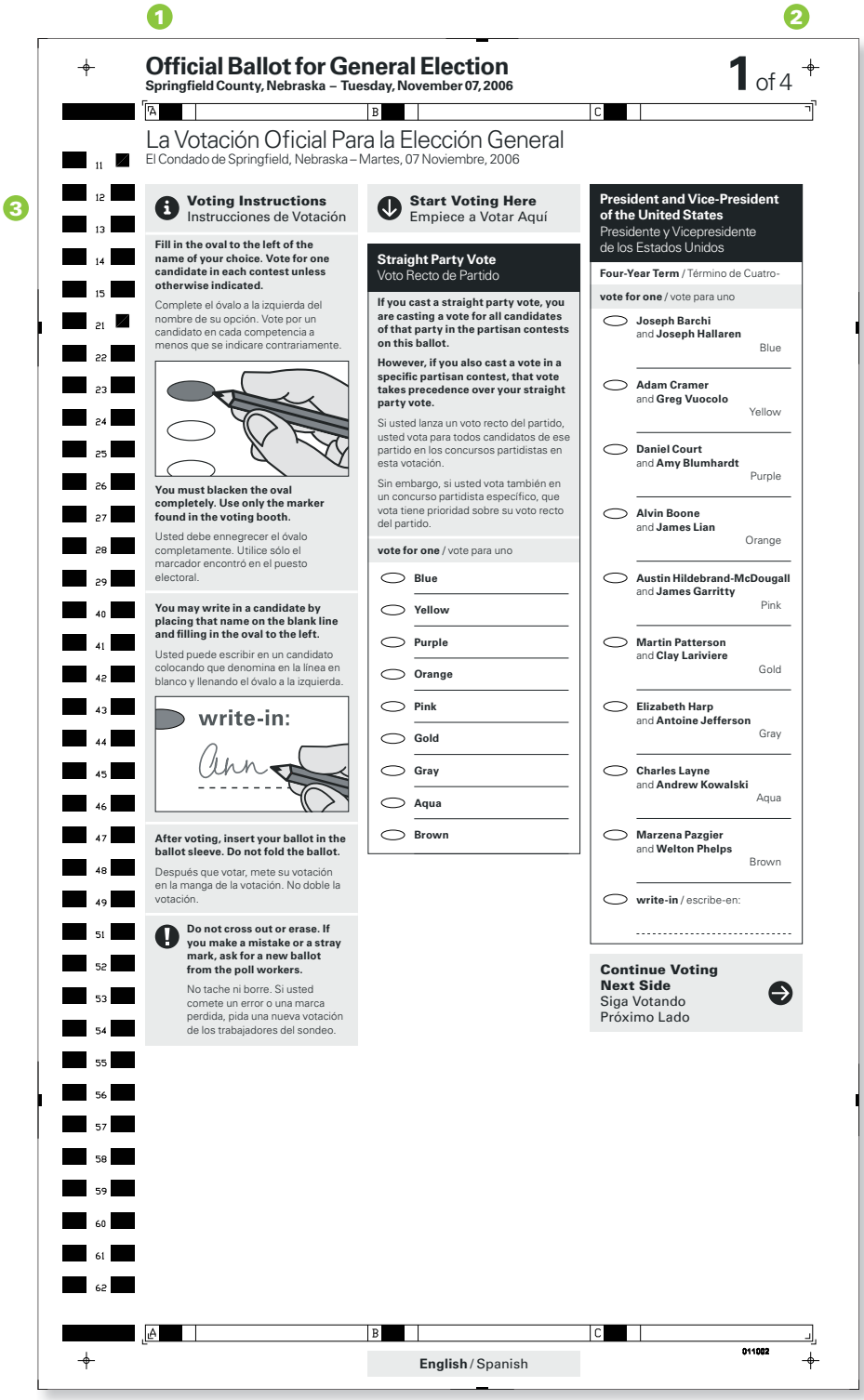
7.4.2.0 / 012503-14 © Election Systems & Software, Inc. 1981, 2002

Initials_____

50% actual size

Colfax County recommended best practices, November 2006

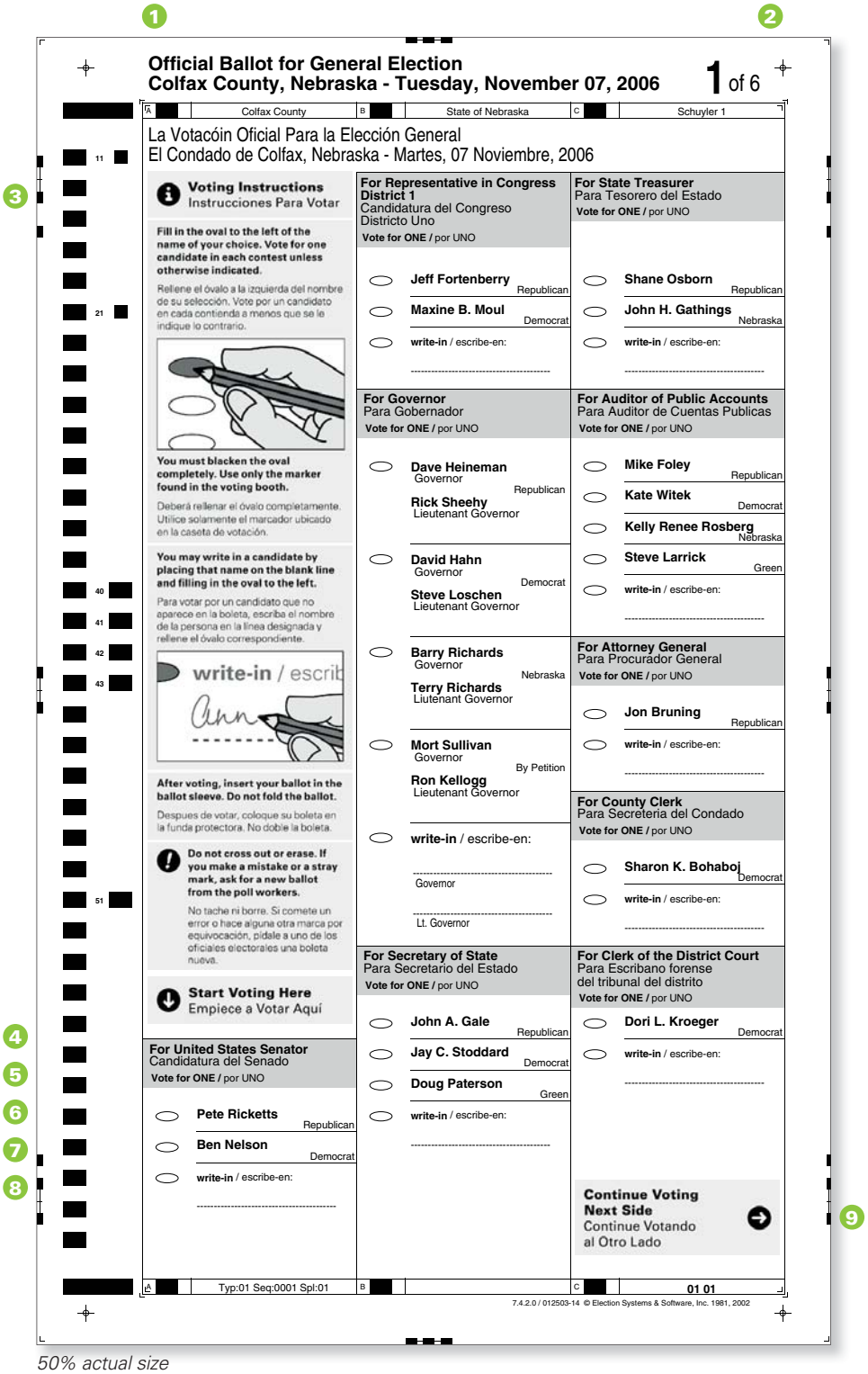
Proposed general election ballot with generic NIST content, displaying the recommended design best practices. This design was approved by the county clerk before production by the ballot vendor. Significant differences from the May 2006 ballot (page 6.11) are numbered below and annotated on page 6.14.



50% actual size

Colfax County Ballot, November 2006

General election ballot based on partial application of new design standards. Significant differences from the proposed ballot design (page 6.12) are numbered below and annotated on page 6.14.



Official Ballot for General Election
Colfax County, Nebraska - Tuesday, November 07, 2006

1 of 6

A Colfax County | B State of Nebraska | C Schuyler 1

La Votacóin Oficial Para la Elección General
El Condado de Colfax, Nebraska - Martes, 07 Noviembre, 2006

Voting Instructions
Instrucciones Para Votar

Fill in the oval to the left of the name of your choice. Vote for one candidate in each contest unless otherwise indicated.

Rellene el óvalo a la izquierda del nombre de su selección. Vote por un candidato en cada contienda a menos que se le indique lo contrario.

You must blacken the oval completely. Use only the marker found in the voting booth.

Deberá rellenar el óvalo completamente. Utilice solamente el marcador ubicado en la caseta de votación.

You may write in a candidate by placing that name on the blank line and filling in the oval to the left.

Para votar por un candidato que no aparece en la boleta, escriba el nombre de la persona en la línea designada y rellene el óvalo correspondiente.

write-in / escrit

After voting, insert your ballot in the ballot sleeve. Do not fold the ballot.

Despues de votar, coloque su boleta en la funda protectora. No doble la boleta.

Do not cross out or erase. If you make a mistake or a stray mark, ask for a new ballot from the poll workers.

No tache ni borre. Si comete un error o hace alguna otra marca por equivocación, pídale a uno de los oficiales electorales una boleta nueva.

Start Voting Here
Empiece a Votar Aquí

For United States Senator
Candidatura del Senado
Vote for ONE / por UNO

- Pete Ricketts — Republican
- Ben Nelson — Democrat
- write-in / escribe-en:

For Representative in Congress District 1
Candidatura del Congreso Districto Uno
Vote for ONE / por UNO

- Jeff Fortenberry — Republican
- Maxine B. Moul — Democrat
- write-in / escribe-en:

For Governor
Para Gobernador
Vote for ONE / por UNO

- Dave Heineman, Governor / Rick Sheehy, Lieutenant Governor — Republican
- David Hahn, Governor / Steve Loschen, Lieutenant Governor — Democrat
- Barry Richards, Governor / Terry Richards, Liutenant Governor — Nebraska
- Mort Sullivan, Governor / Ron Kellogg, Lieutenant Governor — By Petition
- write-in / escribe-en: ---------- Governor ---------- Lt. Governor

For Secretary of State
Para Secretario del Estado
Vote for ONE / por UNO

- John A. Gale — Republican
- Jay C. Stoddard — Democrat
- Doug Paterson — Green
- write-in / escribe-en:

For State Treasurer
Para Tesorero del Estado
Vote for ONE / por UNO

- Shane Osborn — Republican
- John H. Gathings — Nebraska
- write-in / escribe-en:

For Auditor of Public Accounts
Para Auditor de Cuentas Publicas
Vote for ONE / por UNO

- Mike Foley — Republican
- Kate Witek — Democrat
- Kelly Renee Rosberg — Nebraska
- Steve Larrick — Green
- write-in / escribe-en:

For Attorney General
Para Procurador General
Vote for ONE / por UNO

- Jon Bruning — Republican
- write-in / escribe-en:

For County Clerk
Para Secreteria del Condado
Vote for ONE / por UNO

- Sharon K. Bohaboj — Democrat
- write-in / escribe-en:

For Clerk of the District Court
Para Escribano forense del tribunal del distrito
Vote for ONE / por UNO

- Dori L. Kroeger — Democrat
- write-in / escribe-en:

Continue Voting Next Side
Continue Votando al Otro Lado

A Typ:01 Seq:0001 Spl:01 | B | C 01 01

50% actual size

Ballot comparison

Various elements were redesigned for the Cedar and Colfax county ballots. The goal of the redesign was to improve clarity, legibility, and ease of use for the voter. Some of these elements were not fully implemented on the actual ballots used for the election.

1. **Election information**
   Larger type is used for all information critical to the voter.
2. **Page numbers**
   Page numbers are included to help the voter navigate multiple-page ballots.
3. **Voting instructions**
   Voting instructions have been greatly expanded; the language has been simplified, and they include illustrations.
4. **Divisions by "ticket"**
   Previous ballots included subheads that divided the ballot into various categories. These subheads were removed, as they were inconsistent and redundant, and took emphasis away from the information of primary importance to the voter: candidate name and contest title.
5. **Question titles**
   On the new ballots, a gray fill helps voters scan questions more easily. This visual distinction clarifies where each new question begins.
6. **Question instructions**
   Instructions for each question are set apart from the title of the question and separated from the voting options area.
7. **Separation of candidates**
   Hairlines are used to clearly separate the candidate names and help voters make sure they are voting for their chosen option.
8. **Write-in voting**
   The write-in area has been clarified through the use of a more intuitive dashed line and the explicit "or write-in:" identifier.
9. **Ballot navigation**
   The new ballots use a clearer system of navigation to ensure that voters know where they are in the process and what remains to complete. Graphic symbols, such as arrows, provide visual emphasis and help low-literacy and low-vision voters.

State metrics/reporting

Statistics were derived from 2006 election summary reports provided by county clerks. Reports were electronically generated by ES&S counting equipment with a report title "Grand Totals Node 1 Format." The Cedar County report was dated November 7, 2006, at 22:40:27. The Colfax County report was dated November 8, 2006, at 06:22:36.

Results from ballot questions to assess the best practices' impact were analyzed. Undervoting and overvoting rates were calculated for each race by dividing registered voters by the total number of votes counted.

No strong pattern emerged to suggest that the order or placement of contests (whether on page 1 or page 2) made a significant difference to voters in deciding to vote in a race.

	Cedar County	Colfax County
Registered voters	6,415	5,430
Number voting	4,010	3,050

Race with most participation

	Cedar County	Colfax County
	3939 (U.S. Senator)	2955 (County Sheriff)

Undervote

	Cedar County	Colfax County
Average	22.91%	23.61%
High	64.40% (Board of Governors, District 2)	56.45% (Board of Governors, District 2)

Overvote

	Cedar County	Colfax County	Statewide
Average	.22%	.17%	
High	4.7% (Governor)	2.96% (Governor)	.55%

The governor/lieutenant governor overvote rate increased significantly in both counties—both in terms of previous elections in those counties and in comparison with other Nebraska counties. In Cedar County, the overvote rose from an average 0.22% to 4.7% for the governor/lieutenant governor race. A sampling of 43 other Nebraska counties showed a 0.55% average overvote rate in this race.

There is not enough information to determine what may have caused this anomaly. One possibility is that—unlike the prototype ballot designs using the NIST content—the governor's race was the only paired-ticket contest on the ballot. Further study is necessary to determine what led to the overvote increase to identify its cause and try to prevent similar results in the future.

Recommendations

The 2006 pilot study in Nebraska demonstrated that the proposed design system was largely acceptable to participating voters and election officials, and could be partially implemented with moderate effort on the part of the participating service provider, ES&S.

The study uncovered areas where adoption of the best practices will prove challenging, including legislative requirements, tight election calendars, limitations of ballot layout software, lack of experience with translation processes, lack of adequate financial resources to fund significant improvements at the county level, and limited availability of skilled resources during peak election production times. These issues led to the following recommendations:

1. Conduct more observations and interviews.
Future activity in this area should include conducting additional field interviews with election officials from all levels of government, in all parts of the country, and in all roles in the ballot development process. A corollary recommendation is to continue dialog with manufacturers and service vendors.

2. Explore voting experience options related to ballot design with industrial design experts and manufacturers.
Graphic designers and usability experts can enhance the overall voting experience, but the critical relationship between the voter and the voting equipment should also be analyzed, particularly when addressing the needs of voters with disabilities (including mobility or vision).

3. Extend optical scan ballot pilot tests to other locations.
Research should include pilot tests in additional locations that will continue to challenge and refine the proposed design systems. Selected locations should offer diversity in terms of geography, demographics, voting equipment, and legislative requirements.

4. Initiate direct-recording electronic (DRE) ballot pilot studies.
Future studies should include pilot tests with DRE voting equipment. The development of interactive prototypes for pilot-testing in a real election would be complex and would require considerable commitment, but the benefit to voters would outweigh the investment. Pilot test locations should offer diversity in terms of geography, demographics, voting equipment, and legislative requirements.

5. Collect most recent general election ballot samples and voting statistics.
NIST's small collection of ballots from 2004 elections was useful in developing the ballot design best practices. Establish a process to collect and make public a library of currently used ballots and correlated voting statistics.

6. Analyze under- and overvoting by race/issue for the 2006 general election.
Research should be conducted to understand the impact of design on individual race results by correlating rates of under- and overvoting to ballot design choices. While this would not be a fully scientific study, the information would provide insight into the problems voters may have experienced without infringing on their privacy.

7. Establish a national voter survey to measure ballot usability.
Measure voter satisfaction with ballots using interviews and surveys, and analyze the results. The sample should include:

— Ten locations for each optical scan model, reflecting a geographically and demographically diverse population (model + geographical/demographic diversity x 10).
— Ten locations for each DRE model, reflecting a geographically and demographically diverse population.

8. Explore improvements to state and local legislation.
Many State and local laws mandate specific design decisions. Study the extent to which Federal, State, and local laws regarding ballot design vary and how these laws may inhibit the creation of an effective national ballot design system.

9. Establish a national ballot design system.
Encourage a single, simple, and consistent national ballot design system, such as the system used for tax forms. This system should give voters control over candidate ordering on DRE ballots and provide a nationwide system for rotating candidate names on printed ballots. The system should include best practices for the use of simple language on ballot issues (referenda, measures, etc.).

Conclusion

The challenges for achieving a successful and satisfying voting experience extend well beyond ballot design. Ongoing study is necessary to identify existing and proposed legislative requirements that affect ballot design and the voting experience. Unified national ballot design best practices will form a baseline from which to measure national success in terms of the voter's experience; help election officials work more efficiently; and allow manufacturers to focus on other issues of importance.

Effective Designs for the Administration of Federal Elections

Section 7: Research report: Nine research events

June 2007

U.S. Election Assistance Commission

Overview

The design best practices in this document are the results of a user-centered process involving subject matter experts, election officials, and representative voters. Nine of the ten research events the contractor conducted between May and December 2006 are summarized in this section. Section 6 details the tenth event, a case study of pilot tests in Nebraska's 2006 general election.

Report goals

This section presents a chronological account of research activities, communicates research findings, and provides the basis for making best practice recommendations.

Research goals

Goals were established to develop best practice recommendations at the outset of the user-centered design process. They included the following:

— Expanding the body of knowledge and the library of best practices shared among election officials serving citizens.

— Increasing the likelihood that voting will be an easy, efficient, and accessible experience.

— Exploring the effectiveness, flexibility, and scalability of design best practices that have been identified and proposed for application in polling place voter information materials and in various ballot types, both optical scan and direct-recording electronic (DRE).

— Understanding how election materials are used in typical environments and exploring the impact of environmental factors (e.g., location, lighting, temperature, traffic patterns, noise level) on the success of the prototypes.

— Providing voters of various physical and language abilities the opportunity to directly participate in the development and evaluation of design best practices, increasing the likelihood that the needs of these audiences will be met effectively.

— Understanding legislative imperatives and operational challenges of the election design environment at the State and local levels.

— Understanding the attitudes, behaviors, challenges, and needs of citizens who have a right to vote accurately, independently, and easily. Also, identifying models for common voter experiences.

— Understanding common practices in ballot and voter information design and development.

Research methodology

The contractor used the following research methods:

— *Observing elections.* In 2006, the contractor observed primary elections in two New Jersey jurisdictions (rural and urban) and general elections in two of Nebraska's rural counties. The general election observations occurred during the pilot test of localized optical scan ballots and voter information prototypes.

— *Conducting field interviews.* The contractor conducted conversations with election officials in their work environments when possible. Informal interviews with poll workers and election staff at primary and general elections also influenced the decisions.

— *Consulting experts.* The team sought input from a variety of language, literacy, usability, accessibility, and production experts representing a range of voter interests. The contractor interviewed election officials with both State and local responsibilities representing populations diverse in culture, language, population density, and income. For production insights, the team contacted the largest domestic manufacturers of commonly used election equipment.

— *Reviewing existing materials.* Ballot examples from the United States and overseas were reviewed to understand how issues, particularly low-literacy issues, are addressed.

— *Conducting usability evaluations.* Fifty-four usability evaluations with voters in seven States were held.

— *Focusing on prevalent voting technologies.* To help States meet 2002 Help America Vote Act (HAVA) requirements for ballot design and publicly posted voting information on Election Day, the contractor developed solutions for optical scan and DRE ballot formats, and established a voter information system that exceeds minimum requirements.

Materials studied

— *Voter information*

— *Optical scan ballots*

— *Full-face DRE ballots*

— *Rolling DRE ballots*

Guiding criteria

To meet existing election design requirements, the contractor used specifications from the following resources:

— *Legislation.* The work focused on HAVA sections 241(b)(2) and 302(b), which state requirements for the design of ballots and voter information on Election Day. The contractor also reviewed the Americans with Disabilities Act (ADA) and followed the language requirements of the Voting Rights Act of 1965.

— *2005 Voluntary Voting System Guidelines (VVSG).* The contractor paid specific attention to section three, "Usability and Accessibility Requirements." Toward the end of the project, the team received briefings on unpublished 2007 VVSG updates for consideration in final recommendations.

— *Simple language requirements.* The contractor benefited from the expertise of Ginny Redish, her associates, and their simple language reports for the National Institute of Standards and Technology (NIST). Low-literacy experts at the Queens Borough Library in New York City and the National Institute for Literacy also provided language and design input.

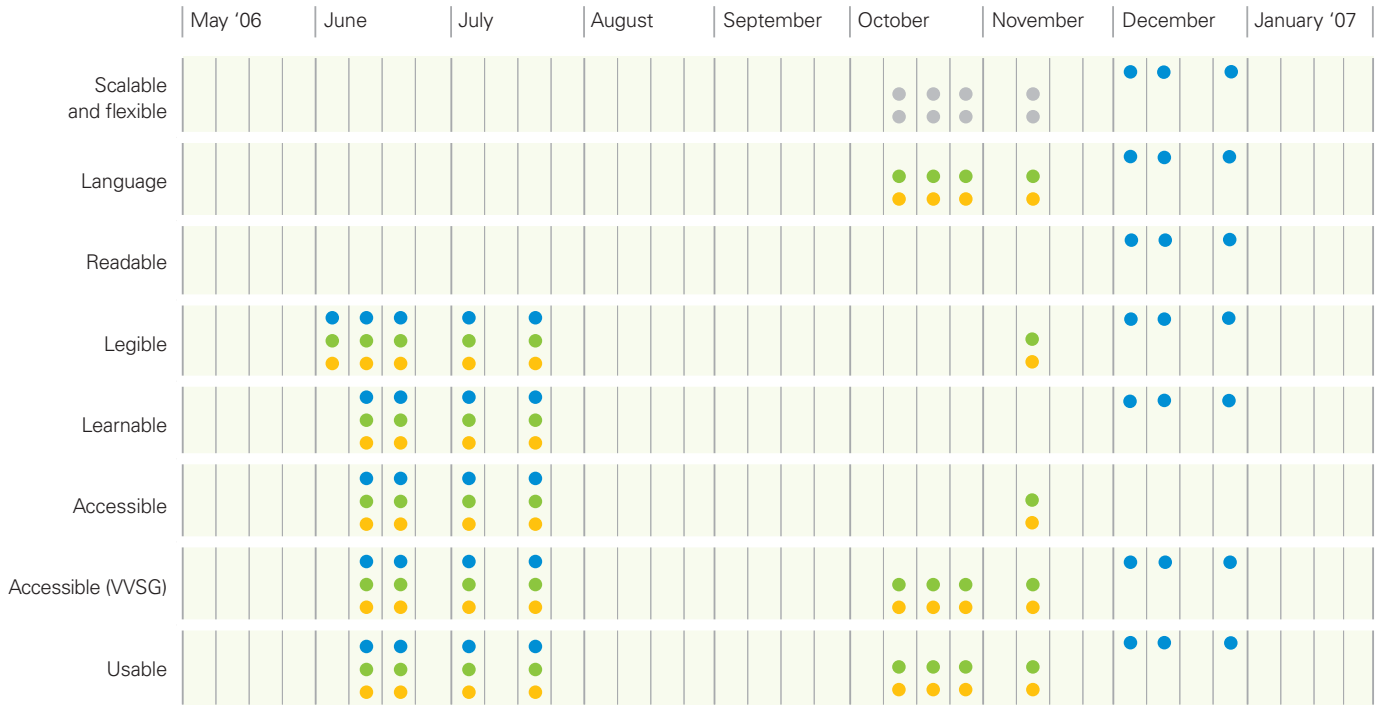
Participants

Research subjects included registered voters, election officials, and various subject matter experts with knowledge valuable to the work of election design. See section 8 for a complete list of participants.

— *Voters.*

Thy contractor interviewed people age 21 years and older without limiting education level, occupation, income, ethnicity, or gender. Participants were located by professional recruitment agencies, online recruiting services, and pilot-test jurisdictions in Nebraska.

The following table shows voter participation in the research and design process by date, material, and focus.



This chart shows when (time is displayed horizontally) and how (success criteria are displayed vertically) voters were involved in the design process via usability testing and observations. The colored circles indicate type of materials studied at each event—voter information in yellow, optical scan ballots in green, and rolling DRE in blue. During these research events, the research team explored aspects of the voting experience important to voter success—for example, ballot usability, legibility and readability, and other topics shown on the table's left side.

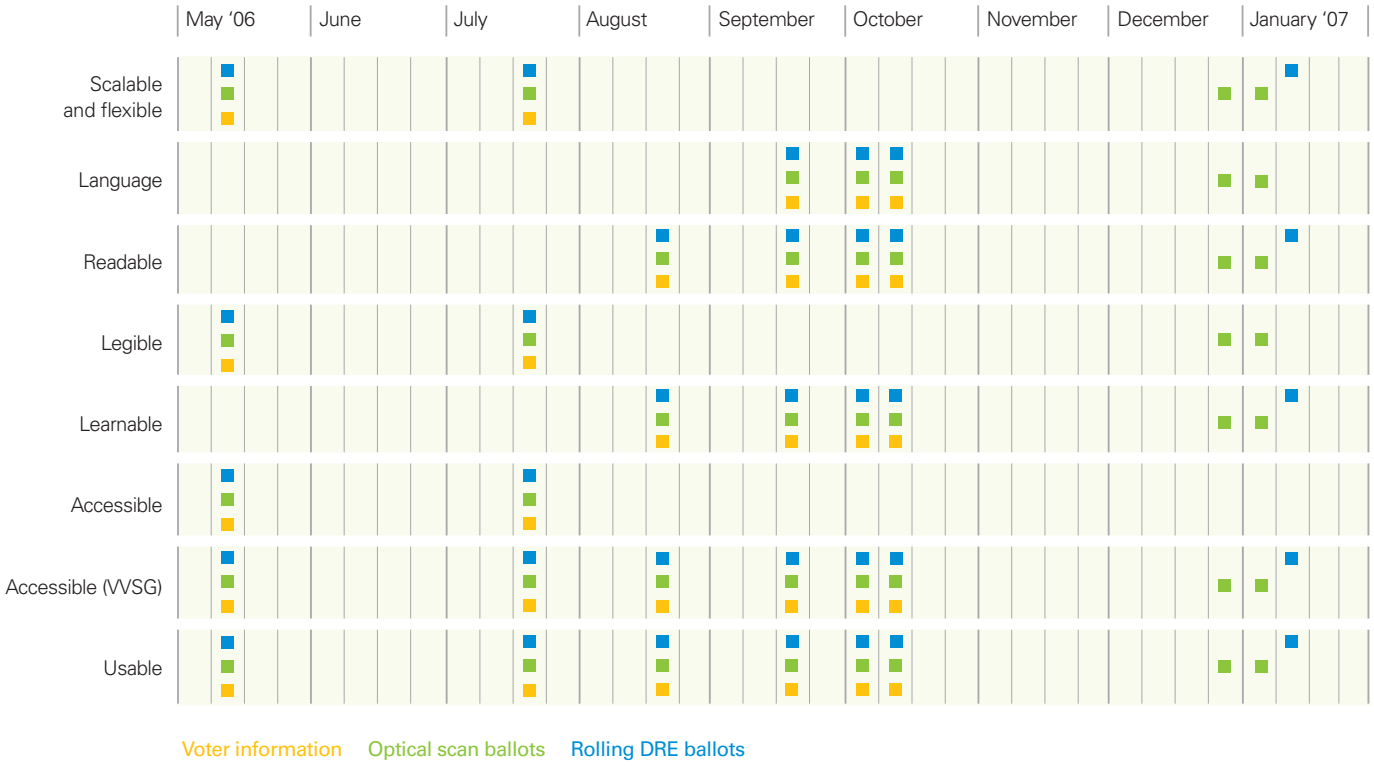
— *Election officials.*
Officials responsible for local, State, and national election management were observed and interviewed. Many participants were members of the Election Assistance Commission (EAC) standards and advisory boards or were recommended by the EAC.

The following table shows election official participation in the research and design process by date, material, and focus.

The team engaged officials throughout the course of research. The colored triangles indicate the type of materials presented to election officials for review at each event—voter information in yellow, optical scan ballots in green, and rolling DRE in blue—and correspond to the vertical research goals listed at left.

— *Experts.*
Specialists, advocates for user groups with special needs, and other elections professionals were interviewed and consulted. References for experts came from EAC standards and advisory boards, election officials, the contractor's network of contacts, and other experts.

The following table shows expert participation in the research and design process by date, material, and focus.



The team engaged experts throughout the course of research. The colored squares indicate the type of materials presented to experts for review at each event—voter information in yellow, optical scan ballots in green, and rolling DRE in blue—and correspond to the vertical research goals listed at left.

Assumptions
The researchers used the following assumptions in planning research and design activities:

— Audio design is product-specific. Without engaging with a technology partner for rolling DRE development, audio solutions will not be included in best practices.

— Given the full-face ballot systems, expert input, and examples available to us, design best practices for paper-based full-face ballots can be extrapolated from the optical scan findings.

— Experts sufficiently represent audiences and issues for which they advocate, eliminating the need to test extensively with each represented population.

— Ethnographic and qualitative inquiry best support the identification of patterns, behaviors, and unspoken needs of voters and election officials. By studying what people do (observations and usability studies), rather than what they say (surveys and focus groups), the team can uncover not only how people generally react to materials but also why. To protect voters' individual privacy, time and accuracy studies, though considered, were not pursued.

Recommendations

Language and content
Emphasize voter needs over administrative and vendor requirements.

— Use clear, concise language (simple language) for all content.

— Use one language per ballot. To meet usability standards, display no more than two languages.

— Summarize long ballot measure text as another option (alongside required formats) to improve communication and usability for voters.

Text use and size
Use upper- and lowercase sans serif type, set at a minimum of 12 points for all ballot content voters will read. Given the choice between adequate type size (12 points) and fewer pages, ballots with 12 point type and more pages were found to be more usable than those with fewer pages and smaller type. Ballot legibility and ease of comprehension for voters are more important than printing costs.

— The Univers type family is a common, readable, and consistent font choice for all materials.

— Non-Western typefaces should be selected on the basis of simplicity, compatibility with the Univers type family, and for cultural appropriateness. In the applications shown, LeHei Pro is used for Chinese.

— The typesetting of the ballot measure text is critical. Too many or too few characters per line inhibit legibility and comprehension. The goal should be 40–60 characters per line. Research indicates that many users find line lengths of more than 60 characters or less than 20 characters hard to read.

— There is a direct relationship between type size and line spacing (leading). Lines of type that are too close together or too far apart inhibit legibility and comprehension. Typical optical scan ballot measure content in these best practices is set at 12 points, with 2 points of line spacing.

Color
Use a second color functionally and exclusively for instructions on optical scan ballots.

— On rolling DRE ballots, the strategic application of color effectively differentiates levels of information and voter activity.

Icons and graphics
Accurate instructional illustrations help voters (especially less literate voters) understand requirements, processes, and options.

— Use informational icons such as  ,  , or  to draw attention to unique or important areas of the ballot or to improve the voter's ability to scan dense information.

— Political party icons are not encouraged, as literacy experts and design professionals believe they simply confuse many voters.

Specific recommendations by material

	Voter information	Optical scan / full-face ballots	Rolling DRE ballots
Language and content	Person-to-person communication is preferred by voters in polling places—reading posted information is not their first impulse. Repetitive placement of information supports voter needs at various stages in the voting process. Long, required text (such as Bill of Rights data) is most easily accessed in table, booth, or binder formats, not in wall displays.	Bold/regular text use effectively differentiates languages derived from a common alphabet on two-language ballots. Languages derived from different alphabets do not require bold/regular differentiation. Long text (such as referendums) is most easily read in a two-column, side-by-side format. Column labels on full-face ballots help orient voters and enhance readability.	Repetitive and consistent interactions are helpful to voters, particularly low-literacy voters. Limiting one contest per screen reduces incidents of undervoting. Voters appreciate knowing ballot length and contents before voting.
Text use and size	Titles should be shown at a size which is easily scanned and read by most voters at a distance of six feet when displayed on a wall.	Usable type size takes precedence over ballot length.	Default setting should address the needs of the majority and provide additional settings, for those voters who need to adjust text size or increase contrast.
Color	Titles in white text against colored ADA-compliant backgrounds are easiest to read.	A second color tint effectively differentiates and calls attention to ballot instructions. Tint background on contest titles enables scanning.	Reserving color use for system messages and navigation focuses users on critical voting functions.
Icons and graphics	Use of informational icons calls attention to important steps and processes and aids low-literacy users.	Heavier vertical lines between columns support column-by-column reading. Use of informational icons calls attention to important steps and processes and aids low-literacy users.	Use of informational icons calls attention to important steps and processes and aids low-literacy users.
Other	Voter information materials should prioritize optimal user experiences first and address compliance with standards second.		Evaluation participants successfully mastered the system despite differences in age, experience, and voting history.

Events

This table highlights the materials in focus during each research event.

No.	Pages	Events	Voter information	Optical scan ballots	Full-face DRE ballots	Rolling DRE ballots
1	7.11–7.13	Expert reviews at EAC Standards & Advisory Board meetings	●	●		●
2	7.14–7.17	Observations of New Jersey primary elections	●	●	●	
3	7.18–7.21	National usability evaluations	●	●		●
4	7.22–7.24	Literacy, international, and elections usability expert input	●	●		●
5	7.25–7.27	Multiple language review	●	●		●
6	7.28–7.31	Studies with literacy experts		●		●
7	7.32–7.35	Expert reviews of paper ballots		●		
8	7.36–7.41	Rolling DRE usability evaluations				●
9	7.42–7.44	Expert reviews of rolling DRE ballots				●

How to read events

Following a standard qualitative research protocol, each event summary documents the following aspects of study:

— Title and location
— Research session goals (see paragraph below for specific goal descriptions)
— Methodologies used to achieve goals
— Research materials
— Research participants
— Summary of findings, conclusions, or actions

User requirements

— *Usable:* Tasks are efficient, accurate, and easy.

— *Accessible:* Materials are usable by people with disabilities (low vision and reduced mobility specifically, which do not always require accessibility solutions from rolling DRE hardware).

— *Language:* English and non-English reading options are clear and understandable.

— *Legible:* Typewritten characters and paragraphs are easily read.

— *Readable:* Ideas presented are clear and easily understood.

— *Learnable:* Tools, skills, and new concepts are easily mastered.

— *Credible:* The voting process is authentic, capable, and trustworthy.

Production requirements

— *Scalable:* Adjustments in content quantities are easily handled.

— *Flexible:* Adjustments to changing conditions are easily handled.

— *Reusable:* Re-creations are easy and effective.

Event one: Expert reviews at EAC Standards & Advisory Board meetings

Washington, DC
May 13–14, 2006

Overview

The contractor conducted informal interviews with selected attendants from the EAC Standards and Advisory Board sessions.

Materials studied

Voter information	●
Optical scan ballots	●
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	
	Legible and readable	●
	Learnable	
	Credible	
Clarify production requirements	Scalable	●
	Flexible	●
	Reusable	●
Clarify legislative requirements		●
Clarify standards requirements (non-legislative)		●
Clarify existing practices		

Methodology overview

Expert interviews	●
Expert feedback on prototypes	●
Usability evaluations	
Observations	
Field interviews	●
Reviews (non project materials)	

7.12	Nine research events	Events	Event one	

Participants

— Alexia Morrison, Election Specialist, Nebraska Secretary of State Office
— William Campbell, City Clerk, Woburn, Massachusetts
— Howard Sholl, Deputy Administrative Director, Department of Elections for New Castle County, Delaware
— Doug Lewis, Executive Director, The Elections Center
— Nancy George, Voter Information Coordinator, AARP
— David Baquis, Accessibility Specialist, United States Access Board
— Paul DeGregorio, Chairman, U.S. Election Assistance Commission

General findings summary

Topic	ID	Finding	Conclusion
Legislative requirements	1	HAVA requirements and user-centered design practices can be in conflict with State and local elections legislation—making improvements for users difficult as a result.	Best practices should include realistic and incremental steps to support larger changes over time.
	2	Varied elections legislation makes single design solutions difficult to define, implement, and enforce.	
	3	Local legislative requirements do not often position the user/voter at the center of the design process.	

Voter information summary

Topic	ID	Finding	Conclusion
Production requirements	1	Officials responded readily and favorably to voter information materials.	Create easily modified/downloaded templates to promote easy adoption by officials. Ensure materials are designed to meet logistical challenges of inventory, storage, transportation, and budget while supporting voters' needs.
	2	Improvements to voter information materials offer fast, tangible evidence of progress for election officials. Generally, there are fewer legislative constraints on voter information materials than ballots.	
	3	Materials and content are reused (where possible) in elections.	

7.13	Nine research events	Events	Event one	

General findings summary

Topic	ID	Finding	Conclusion
General requirements	1	Prototypes reviewed by officials and experts were considered generally successful.	Feedback from officials and experts influenced plans for formal usability tests and further research.
User requirements	2	Election officials discussed pros and cons between natural/electronic audio strategies in rolling DRE ballots. Some indicated a preference for digital audio, because this offers the ability to change speed and pitch while allowing users to skip sections of the ballot that don't interest them. Advocates of natural voices noted that they are easier for many people to understand and are friendlier than digital solutions. This is an important consideration when many voters, not just those with hearing loss, can be intimidated by the voting process.	Further interviews should be conducted with accessibility experts to understand the pros and cons of each approach.

Next steps

— Collaborate with Alexia Morrison of Nebraska State Board of Elections to determine whether a pilot study during the November 2006 general election will be feasible.

— Plan usability tests of current prototypes with voters.

— Follow up with experts on voter accessibility requirements, particularly visual impairment issues.

Event two: Observations of New Jersey primary elections

Newark, NJ (urban setting)
Hunterdon, NJ (rural setting)
June 6, 2006

Overview

The contractor observed operations in two counties with contrasting environments, population densities, and cultures. Polling places the contractor visited in these counties included a fire station, a Veterans of Foreign Wars (VFW) hall, a high school gymnasium, and a school cafeteria.

Materials studied

Voter information	●
Optical scan ballots	●
Full-face DRE ballots	●
Rolling DRE ballots	

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	●
	Learnable	●
	Credible	●
Clarify production requirements	Scalable	●
	Flexible	●
	Reusable	●
Clarify legislative requirements		●
Clarify standards requirements (non-legislative)		●
Clarify existing practices		●

Methodology overview

Expert interviews	
Expert feedback on prototypes	
Usability evaluations	
Observations	●
Field interviews	●
Reviews (non project materials)	

Participants

— Carmine Casciano, Commissioner of Registration, Superintendent of Elections, County of Essex, New Jersey

— Richard Lynch, Office of the County Clerk, Hunterdon County, New Jersey

— Voters

— Poll workers

7.15	Nine research events	Events	Event two

General findings summary

Topic	ID	Finding
Familiarity	1	Despite differences between the two counties observed, there was an informal, small-town atmosphere in all polling locations. Three factors contributed to this perception: 1) Poll workers were "veterans" in their roles and at their locations; 2) Turnout was low for the primary election and voters appeared to be dedicated, enthusiastic, and familiar with the local voting process; and 3) Most voters were of the same age-group as poll workers and seemed to be acquainted with them outside the Election Day context.
Translations	2	Poll workers at Newark locations included English, Spanish, and Portuguese speakers, though only English and Spanish were required on the ballots. The English-speaking observation team noted few interactions taking place in non-English languages.
Experience	3	Most of the poll workers the contractor interviewed had at least 4 years of experience but many had more than 10 years. Each poll worker tended to serve in the same polling location and shared casual conversation with voters while conducting election proceedings. The balance between helping voters, who were apparently social acquaintances in many cases, with new equipment while honoring their privacy appeared to pose a challenge to poll workers.

Voter information summary

Topic	ID	Finding	Conclusion
Logistics	1	The signs did not come with instructions. Poll workers claimed to "just know" how to hang signs based on available wall space, where the right location seemed "obvious," or they just "knew where voters would look."	Signs should be labeled as indoor or outdoor and with a publication ID. Poll workers and therefore voters may benefit from sample floor plans explaining how and where posters based on ID should be displayed to enhance the flow of traffic and improve the overall voter experience. Best practices outlining optimal hanging height and sequence will also improve the readability and impact of voter information signs.
	2	In one Newark polling place, voter information posters were delivered mid-morning, hours after polls had opened. The purpose and placement of the voting information was unclear to poll workers, despite their experience. Twenty minutes after the voter information arrived, and with few voters present, poll workers continued to debate what to do with the new posters.	Plans should include a checklist of posters required so that those packing and receiving polling place kits can identify missing items before opening the polls.
	3	Polling place sign pick-up and delivery was inconsistent and not well organized. Large instructional posters for the DRE were packaged in the Sequoia AVC Advantage equipment and delivered to the polling place the night before Election Day. These materials were also returned for storage in the machines after the election. Along with provisional and emergency ballots and affidavits, the elections judge picked up other signs the night before the election for hand delivery the morning of Election Day.	Develop solutions for streamlining and organizing the transfer of voter information materials to polling locations.

Voter information summary (continued)

Placement	4	The physical environment at many polling places prevented optimal information flow. Some locations were small and busy, with little room to post signs in such a way that they could help guide voters through a logical flow of information. Other locations were large and posters got lost.	Best practices should provide guidance regarding the size and number of posters to be displayed in various settings. Develop voter information packages appropriate for large and small locations and tailored to address the number of voters anticipated to participate.
Poster and font size	5	Voter information signs were typically 8.5" x 11" and appeared to be photocopied. There were two exceptions to this: the New Jersey Voter Bill of Rights was 11" x 17" and a "How to Vote" sign was 28" x 36", mounted on foam core.	The best practices recommendations should be sensitive to limited production skills, tools, finances, and equipment available to election officials.
Production	6	Most posters were relatively generic, optimized for ease and speed of production rather than quality of user experience. Most likely, a basic design program was used to create the signs, which were then photocopied by the county. Directional signs, for example, arrows guiding voters through hallways to a voting location, were handmade in some locations.	Quality of voter information materials should appropriately reflect the importance of the voting process.
Awareness	7	Few people paid attention to voter information. Voters who did approach signs stood quite close to them. This could indicate that voter information materials were poorly placed, unnecessary, or illegible.	Citizens should be able to identify the purpose of a voter information poster from a distance. Most people should be able to read details standing a comfortable distance from the wall, approximately 3 to 4 feet.
Instructions	8	Poll workers were somewhat unfamiliar with the new equipment used in New Jersey. Poll workers in Newark referred to voter information posters when instructing voters. Unfortunately, "How to Vote" signs instructed voters to cast their ballot by pressing a yellow Cast Vote Button, however, the actual Cast Vote Button on the equipment was red. When poll workers told voters in the booth to press the yellow button, sometimes repeatedly, voters were unable to cast their ballots. Upon realizing the discrepancy, voters appeared less confident in the system. Some poll workers and voters suggested that a model voting machine be used to demonstrate the process before entering the booth rather than relying solely on postings.	Encourage poll workers to offer information to voters in multiple ways, reinforcing verbal instructions with simple and accurate written instructions when possible. Confirm that information on instructional posters matches ballot and equipment. Consider providing hands-on, on-site demonstrations of voting technology to both voters and poll workers.
Information flow	9	Despite effective voter information materials, poll workers play a primary role in assisting voters. This may be particularly true in primary elections (where traffic is reduced) compared with general elections, and in settings where voters and poll workers are familiar with one another.	

7.17	Nine research events	Events	Event two	

Full-face ballot summary

Topic	ID	Finding	Conclusion
Voter preparedness	1	New Jersey has historically required a full-face ballot, but the Sequoia AVC machine was introduced in Newark for the first time during this election. This gave the team the opportunity to observe new product introduction. The observers focused on voter interactions before and after their ballots were cast, paying special attention to questions directed to poll workers from behind the ballot booth curtains.	No specific issues were observed with the ballot; however, many voters were relieved to find the layout of the new machine familiar. Some expressed frustration at having to learn a new system but didn't mention specific issues.

Event three: National usability evaluations

Baltimore, MD; Grand Island, NE; Lincoln, NE; Los Angeles, CA;
Orange County, CA; Minneapolis, MN; Santa Fe, NM
June-July, 2006

Overview
Sixty-minute, one-on-one, task-based evaluations and think-aloud usability tests were conducted with 44 representative voters in seven U.S. locations. The contractor also interviewed election officials at each session.

Materials studied

Voter information	●
Optical scan ballots	●
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	●
	Learnable	●
	Credible	●
Clarify production requirements	Scalable	
	Flexible	
	Reusable	
Clarify legislative requirements		
Clarify standards requirements (non-legislative)		
Clarify existing practices		●

Methodology overview

Expert interviews	●
Expert feedback on prototypes	
Usability evaluations	●
Observations	
Field interviews	
Reviews (non project materials)	●

Methodology

Each participant voted using an optical scan ballot prototype and a proposed DRE ballot prototype. The order of the ballot types alternated at each session, and research moderators played the role of poll workers, answering questions or guiding participants only at their request.

To help the research team test primary use cases, participants were given a simple ballot script to vote for or against retentions, memorandums, and ballot measures.

- Vote for a straight ticket (single party)
- Vote for a candidate in a winner-take-all contest
- Cast a write-in vote in a winner-take-all contest
- Skip a contest
- Vote for a slate of candidates in a multi member contest
- Change a selection in a multi member contest
- Vote to retain a candidate in a retention contest
- Vote for or against a ballot measure
- Review selections
- Complete a contest previously skipped
- Return to a contest and change a previously selected vote before casting the ballot
- Cast the ballot
- Select a language (DRE)

After voting with both ballot types and viewing posted voter information, participants were asked to provide feedback on their ability to complete tasks and to discuss challenges and opportunities they encountered.

The researchers probed design elements using visual aids such as ballot size, sequencing patterns, fonts, text size and alignment, contrast variations, language, instructional illustrations, navigational elements, white space, line weight, hierarchy, and color. The form and placement of voter selection marks was also reviewed.

Participants

The research team met with 44 English and bilingual English/Spanish speakers between the ages of 21 and 79 years. Participants were recruited through local election officials, online classified ads, and national recruiting firms.

Voter information summary

Topic	ID	Finding	Conclusion
General	1	Voter information was well accepted. Participants and election officials offered few suggestions for improvement.	
Multiple languages	2	Some participants requested that information be aggregated by language rather than by topic. For example, Chinese speakers would be able to read information in one place rather than across three signs.	As with ballots, the research team recommends single-language presentation with accurate and context-specific translations. Limit presentation to two languages per poster.
Color	3	The color system and clean design effectively directed attention and established voting as an important citizen's duty.	
	4	The color system was considered easy to read and engaging.	
Life expectancy/ durability	5	Election officials designated some postings as permanent and others as disposable and contest-based. Life expectancy helps determine recommended reproduction methods.	

Ballot summary

Topic	ID	Finding	Conclusion
Multiple languages	1	Although most participants supported the idea of multiple language options on ballots, a majority preferred single-language presentation because it allowed them to proceed more quickly and with greater clarity.	Recommend single-language presentation with top-quality, accurate, contextual translations. Limit presentation to two languages per ballot on printed materials.
	2	Security (particularly with optical scan ballots) and accuracy of translations was a concern, rather than usability, when discussing single-language presentation.	
	3	Some areas require more than one language to be presented on a ballot simultaneously. For example, Los Angeles County, CA, requires more than six languages on one ballot.	Use of multiple languages on ballots poses significant usability issues.
Readability	4	The length and language used in measures in the prototype proved problematic for many users. For example, there was concern about making accurate selections when double negatives were used in descriptive copy.	Simple language should be used for all ballot content. Text for amendments and referendums should be kept as short as possible. Use short sentences and paragraphs with direct structure.
	5	Ballot measure titles on the prototype used were not found to be descriptive of content.	Use titles that accurately introduce ballot content.
Navigation	6	Participants wanted a reference to their place in the ballot to help them manage their time and feel in control of their progress. Since participants could not scan the full contents of the ballot as they can with paper systems, this was particularly important while participants worked with the DRE prototype.	Page numbers should be used with all ballots to help users maintain their sense of control over the experience. Similar referencing should be applied to the DRE prototype; an overall table of contents should also be provided.

Ballot summary (continued)

Color	7	Users appreciated the use of color, preferring it to black-and-white versions.	Color can be an effective tool for differentiating information on ballots, but should be used to clarify rather than as mere decoration.
Accessibility	8	Some participants had difficulty using optical scan ballots, expressing discomfort with readability and control over handwriting. This could be related to the success in design rather than platform.	Users preferred the DRE prototype. Most felt that it was faster and easier to use than the optical scan prototype, although both featured the same content.
Learnability	9	Some participants were unfamiliar with computers and initially felt intimidated by the DRE prototype. These participants quickly learned how to use the prototype and moved easily through the ballot.	First-time or infrequent voters will need simple how-to-vote instructions before voting. Optimally, this will occur before Election Day. Simple opt-in tutorials are also recommended for DRE solutions.
Security	10	Security concerns were often voiced when discussing electronic formats and rarely were brought up with paper ballots.	Visual design can significantly increase the perception of credibility, but back-end programming must support promises made in the user interface.
Familiarity	11	Participants and election officials preferred familiar ballots and voter information materials, even when familiar materials were recognized as inferior.	The evolution of election design practices and materials should be gradual to accommodate user learning curves and comfort levels.
Readability	12	Referendums and measures were difficult to understand, as were instructions for straight-party voting. Simple language requirements should be implemented to create baselines for reading levels and paragraph lengths in ballots.	Use short sentences and paragraphs. Summarize lengthy information at the beginning of statements. Set minimum, measurable standards for writing such as California's requirement that referendums have 75 words or fewer or a Flesh-Kincaid Grade Level score or a Flesh Reading Ease score.
Navigation	13	Participants quickly fell into interaction patterns regardless of content variations.	There should be a clear system and placement for all ballot components such as contest titles, candidate choices, instructions, navigation, etc.
Instructions	14	Participants often failed to notice that voting instructions changed from contest to contest.	Call out changes in voting instructions with graphic techniques such as a countdown system, color, or graphic symbols.

Next steps

— Refine materials based on user feedback.

— Review feedback and subsequent refinements with low-literacy experts.

Event four: Literacy, international, and elections usability expert input

Washington, DC
August 7–8, 2006

Overview

The contractor reviewed the International Federation of Election Systems (IFES) ballot library, met with National Institute for Literacy reading experts, and reviewed NIST best practices for usability testing.

Materials studied

Voter information	●
Optical scan ballots	●
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	
	Accessible	
	Language	●
	Legible and readable	●
	Learnable	
	Credible	
Clarify production requirements	Scalable	
	Flexible	
	Reusable	●
Clarify legislative requirements		
Clarify standards requirements (non-legislative)		●
Clarify existing practices		●

Methodology overview

Expert interviews	●
Expert feedback on prototypes	●
Usability evaluations	
Observations	
Field interviews	
Reviews (non project materials)	●

Participants

— Sharon Laskowski, Manager, Visualization and Usability Group, Information Technology Lab, NIST

— June Crawford, Senior Program Associate/Learning Disabilities and Adult Reading, National Institute for Literacy

— Terezia Matus, Librarian, International Federation of Election Systems

Best practices in election usability testing
Sharon Laskowski was interviewed about ballot design and voting technologies. She recommended contacting Michael Kerr of the Information Technology Association of America (ITAA) and John Borras of the Organization for the Advancement of Structured Information Standards (OASIS). Both organizations have ballot manufacturers as members.

Ms. Laskowski provided an update on usability, accessibility, and equipment standards to be included in 2007 VVSG updates. She also shared her expertise on usability testing, which informed subsequent phases of the research.

Best practices in international ballot design
IFES houses an extensive collection of international ballots. This collection was reviewed to identify international best design practices, particularly those that address the needs of less literate voters.

Topic	ID	Findings	Conclusion
Color	1	The collection used color extensively.	Use of color should be considered in U.S. ballots.
Photographs	2	Reproduction quality of candidate photographs was usually poor and the large amount of space used for candidate photographs was problematic.	Imagery may aid in candidate recognition if quality of photos and reproduction are both of high quality.
Party branding	3	Party branding was common, although political party icons used were not intuitive.	Political party icons were not intuitive, although they may be more relevant in a cultural context. Without clear meaning, icons added significant clutter to the ballots.
Language	4	Few of the ballots observed displayed more than one language.	
	5	Many countries have significantly less complicated ballots than the United States, sometimes consisting of a single race only. This difference makes it difficult to directly apply the same solutions.	Due to the complexity of U.S. ballots, adding icons and images to offer an image-based read of the ballot, as well as a text-based read, seems likely to only increase its length and complexity.

Best practices in design for low-literacy audiences

June Crawford of the National Institute for Literacy was interviewed about the use of graphics in ballots for low-literacy voters, and specifically the conventional uses of political party icons, a common communication device geared toward low-literacy populations. Ms. Crawford also maintained that citizens with reading levels below third or fourth grade would require audio support to effectively vote with ballots. Although the team was not delivering audio design solutions, reading tools providing audio support were also examined.

Topic	ID	Finding	Conclusion
Simple language	1	Clear, direct, and simple language will make ballots easier to read and use than legal jargon.	
Content distribution	2	An optimal print design would be a "booklet" depicting one contest per page with use of images, graphics, color, and large text.	As often as possible, isolate ideas to one per page. This can easily be applied to DRE solutions.
Comprehension	3	There are many successful interaction strategies used in software samples that could be leveraged to enhance the experience for those with minimal reading skills, for example, highlighted text to guide readers.	Test highlighting on DRE prototypes to improve reading comprehension.
Audio	4	Particularly when language is difficult, clear and consistent visual and interaction patterns and immediate confirmation of success or failure will reduce confusion.	Sound effects can reinforce interaction without adding visual overload. Work with manufacturers to understand and document realistic opportunities.
	5	Audio is a useful aspect of design for those with low-literacy skills, reinforcing words displayed and offering useful interaction feedback.	Audio controls should be offered throughout the experience.
Minimal reading levels	6	All print materials should be usable by those with a third- or fourth-grade reading level. Materials targeting this educational level should be reviewed.	Use large type, short sentences, and paragraphs to reach those with low-literacy.
Usability testing	7	Reading challenges do not vary by location. Testing in particular geographic areas of the U.S. will not be necessary, although some areas may benefit more than others from improved design.	

Next steps

Conduct research interviews with recommended experts:

— Linda Church, Peter Waite, and Marcia Tait at Pro Literacy America

— Janice Cuddahee and Kevin Smith at Literacy New York (one of the largest literacy programs in the United States)

— Queens Library Adult Services program (for insight into the diverse low-literacy community it serves)

Event five: Multiple language review

September 19–October 18, 2006

Overview

The contractor hired a professional partner to translate samples from the optical scan ballot, rolling DRE ballot, and voter information prototypes into various languages to test the cultural appropriateness, flexibility, and scalability of the design systems.

Materials studied

Voter information	●
Optical scan ballots	●
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	●
	Learnable	
	Credible	●
Clarify production requirements	Scalable	●
	Flexible	●
	Reusable	
Clarify legislative requirements		
Clarify standards requirements (non-legislative)		
Clarify existing practices		

Methodology overview

Expert interviews	
Expert feedback on prototypes	●
Usability evaluations	
Observations	
Field interviews	
Reviews (non project materials)	

Methodology

The contractor solicited translation proposals from two recommended organizations: Compass Languages and CTS Language link. Compass Languages was selected (as many elections vendors are) on the basis of price.

The partnership and content delivery process offered insights into specific challenges facing officials with bilingual production requirements, such as file-sharing, formatting, font compatibility, stylistic consistency, delivery schedules, and turnaround times.

The templates and content delivery process provided insight into the production challenges experienced by election officials, including file formats, font compatibility, typographic treatment, and turnaround time.

Working with their current prototypes, the contractor translated several versions of one- and two-language optical scan ballots, nine rolling DRE ballot screens, and 12 voter information pieces into Arabic, Chinese, and Vietnamese samples. These languages were chosen for their variety to challenge the flexibility of the design system.

Participants

— Compass Languages, professional translation company

7.27	Nine research events	Events	Event five	

Next steps

Topic	ID	Finding	Conclusion
Context	1	Context is critical to the quality of a translation.	Translation companies need to see the materials in their designed form so that they can offer specific and accurate translations.
Original materials	2	Materials should be crafted in simple English before being translated into other languages as this helps to ensure that the desired literacy level is achieved, regardless of language.	The best practices document should offer planning tools that encourage election officials to edit materials for simple language before alternate language treatments.
Process and tools	3	The design templates provided were helpful despite compatibility issues when sharing files between Mac and Windows versions of the same software. PDF files were used to review and comment for each round of refinement.	To increase the likelihood of quality results, define a process and require tools with the translator that will allow rapid translations in the context of the ballot design and outside the heat of elections deadlines.
Typography	4	Recommended font families were not available in other languages. The translator needed to buy the fonts required for this project. Compass Languages worked with the contractor to identify and document appropriate font families, size, and weight requirements to ensure legibility across all languages.	
Font	5	Treatment of typography is important to accurate translations; how text wraps and lines break will vary from one language to another and influence the readability and meaning of content. During testing, it took at least two review cycles to produce adequate results.	It is essential that professional translators (preferably those with elections experience) are included in the process and given adequate time to translate. At least two rounds of refinement are likely to be necessary for quality translations.
Scalability and flexibility	6	Proposed single-language and dual-language ballots sufficiently accommodated the three languages and resulted in a relatively consistent design product.	

Next steps

— Offer materials to the EAC Language Working Group for review.

— Conduct additional Chinese translations with AIGA China.

Event six:
Studies with literacy experts

New York, NY
September 13 and 27, 2006
October 10, 2006

Overview
The research team interviewed and conducted a series of evaluations of the materials with low-literacy experts at the Queens Library Adult Learning Program.

Materials studied

Voter information	
Optical scan ballots	●
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	●
	Learnable	
	Credible	
Clarify production requirements	Scalable	
	Flexible	
	Reusable	
Clarify legislative requirements		
Clarify standards requirements (non-legislative)		
Clarify existing practices		

Methodology overview

Expert interviews	
Expert feedback on prototypes	●
Usability evaluations	●
Observations	
Field interviews	
Reviews (non project materials)	

7.29	Nine research events	Events	Event six

Methodology
The contractor conducted three 60-minute usability sessions with three to four experts at a time to evaluate working prototypes against comparable materials. Feedback was captured in a standard format throughout all three sessions.

Participants examined core ballot prototypes and alternative studies to review issues of color use, icons, navigation, and treatment of long text in ballots for less literate voters.

Participants
The contractor met with 20 literacy instructors, each with an average teaching experience of 11 years.

General findings summary

Topic	ID	Finding	Conclusion
Simple language	1	Users preferred "Yes" and "No" to "Accept" and "Reject" and "Next" and "Back" over "Forward" and "Previous."	
	2	There is a need for simpler language on ballot measures.	Consider using shorter paragraphs. Consider adding extra space after commas or periods to provide visual break. Consider adding tick marks in left column or using line-numbering conventions. Consider adding extra space between every five lines of text.
	3	The language used on the ballots was considered the main usability obstacle. The literacy instructors initiated a list of words to be avoided and encouraged the development of a list of alternatives that would be included in the final document.	Offer final documents to simple language experts for review and input.
	4	Experts preferred the use of words in addition to icons to label buttons.	

Optical scan ballot summary

Topic	ID	Finding	Conclusion
Straight-party vote	1	Straight-party voting on the optical scan ballots was described as confusing even for experienced, engaged, and educated voters.	Remove straight-party voting from optical scan ballots.
Ballot instructions	2	Illustrations shown on the optical scan ballot were considered useful but inaccurate. For example, the write-in instructions show a name in script while the text asks voters to print.	Confirm consistency of all instructions in the ballot. In this case, revise illustration. Improve contrast in illustrations to accommodate low-vision issues.

7.30	Nine research events	Events	Event six	

Optical scan ballot summary (continued)

Ballot instructions	3	Instructions were considered useful but the literacy instructors questioned the placement of the instructions in the left column, stating that it would be confusing to know where to begin voting. The "Start Voting Here" message was considered helpful but likely to be an insufficient cue, particularly for those with beginning reading skills.	Show another version with instructions placed across the top of the ballot or on a cover sheet. Top-align contest titles (requested by voters in first round of usability testing) to increase readability, save space, and reduce costs.
Voting instructions	4	Literacy instructors preferred the use of minimal color applied to instructions in other versions presented, stating that it draws attention to consistent and critical content without detracting from the visibility of candidate selection.	Create two-color variations to further enhance clear instructions. Demonstrate a similar application of color on two-language ballots.
	5	The exclamation point intended to draw attention to instructions may be overused. Instructors thought it would lose impact if used on every contest.	Reserve exclamation point for unique or important instructions.
Selection data	6	Instructors felt there should be greater distinction between contests and/or columns.	Ideally, each contest would have a separate page with the title of each contest top-aligned to be most user friendly. Initial improvements should create greater clarity and visual hierarchy.
Navigation	7	Instructors anticipated that voters will have difficulty using the three-column format as currently designed. Early readers may attempt to read across the page rather than down columns unless there is greater distinction between columns.	Explore design options to improve readability: vertical lines, alternating background shading in columns, expanding the space between columns, or providing stronger line breaks.
Informational icons	8	Symbols used in the ballot instructions ( ) were considered useful only as a visual cue. The question mark and the information symbol ( and ) were not considered intuitive and were culturally irrelevant for some. The exclamation point used to draw attention to special instructions was considered a symbol of urgency or danger but was also considered appropriate if minimally used.	Explore alternate informational characters and/or a numbering system to draw attention and provide necessary order and direction.
Political party icons	9	According to instructors, it will be difficult to design intuitive, simple political party icons that are descriptive enough for people to understand without instruction.	Remove political party icons or devote an entire research study to their meaningful development.

Rolling DRE ballot summary

Topic	ID	Finding	Conclusion
Introduction	1	Introduction provided in the prototype was considered simple, straightforward, and appropriate. Instructors expected immediate action when selecting a language.	
Language selection	2	Instructors accurately assumed how the straight-party voting would function on the DRE prototype.	Eliminate Confirm Button. Selection of language should trigger an immediate reaction.
Straight-party vote	3	There was significant concern that this option would be difficult for those with minimal language skills to understand.	Build functionality into next prototype to garner participant reaction and feedback.

Rolling DRE ballot summary (continued)

Straight-party vote	4	The ballot instructions were considered a critical element in the voting experience. The prototype tested included only minimal instructions, which elicited few comments.	If possible, eliminate this option. If required, clarify and simplify instructions.
Ballot instructions	5	Voting instructions were easily visible.	The prototype refinement should incorporate ballot instructions, help, and the ability to change type, contrast, and language settings.
Voting instructions	6	Placement and contrast was considered to be satisfactory for current prototype.	Instructions should also be written with a patterned structure. "Vote for 1" and "Vote for up to 3" should follow similar sentence patterns.
Selection data	7	Instructors suggested adding a Skip button to provide confirmation when voters decide not to make a selection.	Prototypes were designed to encourage voters to participate in all contests and therefore tend toward a relatively linear experience. This also simplifies instructions and navigation for users.
	8	The current prototype does not allow users to skip a contest. Once they have made a selection, they are forced into a choice.	Ensure that all possible scenarios are noted and considered for documentation even though not all functionality will necessarily be included in a refined prototype.
	9	Instructors were confused by different instructions for "Select one" and "Select up to three" when trying to de-select a candidate because interaction patterns were different for each.	Consistently offer a tap on/tap off de-selection pattern. Toggle should also be active, offering two effective methods for changing a vote on single-selection contests.
	10	Instructors recommended a pattern of one idea/contest per page. It was assumed that this consistency would serve as a pattern that many early readers appreciate/require.	The literacy instructors preferred one contest per screen.
Navigation	11	Instructors thought the scroll bars, as currently designed, would be confusing for some.	Explore alternate pagination options. Add labels such as "See more" to scroll buttons.
	12	Interaction patterns provided guidance and increased confidence; however, instructors were concerned that navigation did not offer enough consistency.	Ensure that buttons are labeled, placed consistently, and behave consistently throughout the experience.
Help	13	Few noticed the question mark as currently designed, indicating the Help option in the lower left corner of the screen.	Label button "Help" and offer throughout the process. Determine if additional visual cues are helpful in drawing appropriate attention.
Accessibility	14	The literacy instructors anticipated that some students, especially new citizens, will want to vote in English but may want or need to confirm information in their native language.	Offer the ability to change languages, contrast, and font size throughout the process.
Review/summary	15	Some instructors requested immediate and more information telling them: (1) If they have skipped a contest; (2) If so, which one; (3) How to get back to areas of the ballot they may have missed; and (4) How much of the ballot and what type of contests are left. The literacy instructors said novice readers often feel rushed and skip to more easily understood items. Patterns are very important in providing guidance and increasing confidence.	Refine the review/summary pages. Offer access to review/summary pages throughout the voting experience. Consider allowing users to move through ballot sequentially and nonsequentially.
Write-in	16	Write-in candidate functionality was well received.	

Event seven: Expert reviews of optical scan ballots

December 1, 2006

Overview

Optical scan prototypes were offered to the team's panel of experts, election officials, and several major ballot manufacturers for evaluation and feedback.

Materials studied

Voter information	
Optical scan ballots	●
Full-face DRE ballots	
Rolling DRE ballots	

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	
	Learnable	●
	Credible	
Clarify production requirements	Scalable	●
	Flexible	●
	Reusable	
Clarify legislative requirements		●
Clarify standards requirements (non-legislative)		
Clarify existing practices		●

Methodology overview

Expert interviews	●
Expert feedback on prototypes	●
Usability evaluations	
Observations	
Field interviews	●
Reviews (non project materials)	

Participants

— The contractor's panel of experts
— Election officials
— Manufacturers

7.33	Nine research events	Events	Event seven

Research summary

Topic	ID	Finding	Conclusion
General ballot	1	Some State statutes prohibit the use of color. Color printing is also anticipated to be expensive for some jurisdictions.	The contractor recommends two colors for optimal readability and usability. The two-color solution can be translated to a one-color version.
	2	One expert questioned the technical feasibility of breaking long (ballot measure) text across two columns.	Studies showed that two-column display is optimal for voters and the contractor believes that existing vendor technology can accommodate this display.
	3	Some States, such as California, require vote marks to be displayed to the right of candidate names, not to the left.	Place vote marks to the left as per typical convention for form design.
	4	Will Western symbols, such as the exclamation point and question mark, be universally understood?	Symbols are not used without corresponding text explanation. Even if not understood, they serve as visual emphasis and help draw the voter's attention to important information.
	5	The exclamation point is considered a warning instead of a symbol to draw attention to positive information.	Based on feedback from low-literacy experts, the exclamation point should be used on a limited basis.
	6	Some state laws require the use of specific fonts.	The Univers font family was designed to be extremely flexible and legible—the usability studies have confirmed its readability. Very similar sans serif faces may be as effective.
	7	Use initial caps in "Vote for __" instructions. Can "all-caps" instructions be used?	Make change: Use initial caps consistently. All-caps treatments were not recommended in Design for Democracy's and NIST's "2005 Ballot Design Guidance" document. Numerous studies support the use of upper- and lowercase text settings over all capital settings.
	8	Some jurisdictions require tear-off stubs on ballots.	Ballot requirements vary greatly across the country. A general 80-20 majority favoring nonlinear formats was followed.
	9	Some areas require additional information about the candidate on the ballot—for example, three-word occupational descriptions.	Content on the ballot should be kept to a minimum, offering only critical information to support ballot clarity. Additional candidate data (occupation, address, etc.) should be separate from the ballot and available to voters in advance of Election Day.
Ballot instructions	10	Instructions should say, "Use only the pencil provided," or similar tone and content.	Make sure instructions are specific and keyed to ballot technology.
	11	Current write-in instructions state "Print name," but the illustration displays a name written in script.	Confirm consistency of all instructions in the ballot. In this case, revise illustration.
	12	According to one expert, including label "write-in" next to input fields causes overvoting, even when de-emphasized in gray text.	Clarify write-in as an option, not a requirement.
	13	Numbering instructions incorrectly implies a process although the "steps" are not actually sequential.	Keep instructions scannable; consider removing numbers for clarity.

7.34	Nine research events	Events	Event seven

Research summary (continued)

Ballot instructions (continued)	14	Users require persistent voting instructions, although they significantly lengthen the ballot.	Post instructions in voting booth, as well as on ballot.
	15	The message "You do not have to vote in every race" may cause undervoting.	Edit content to maintain clarity and accuracy while encouraging voters to participate fully.
	16	Some experts questioned the placement of instruction in the left column, suggesting it is atypical in the industry and that use of space may be better dedicated to contests.	Show variations on instructions, such as instructions on a cover page and at the top of the ballot, rather than the left column.
Voting instructions	17	When there are two-name tickets, such as "President and Vice President," instructions should read "Vote for 1 pair" rather than "Vote for 1."	Implement this change.
	18	Experts suggested using numerals rather than text in "Vote for ___" instructions.	Implement this change.
Selection data	19	Watch for spacing inconsistencies.	Edit ballot for proper letter, word, and line spacing.
	20	Watch for inconsistent line displays.	Disregard inconsistencies caused by third-party (manufactured) template.
	21	The line separating "Accept" and "Reject" may mistakenly indicate a write-in opportunity to voters.	Leave as is: This has not been a consistent response from voters, election officials, and experts.
	22	Party symbols are considered confusing and challenging.	The literacy and AARP communities interviewed do not support icon use. Where required, it is recommended that officials hire an icon design specialist to help ensure greatest usability.
	23	One expert questioned the position of the ovals on contests with pairs of candidates.	Leave as is: This did not pose usability issues in the studies.
	24	One election official suggested separating constitutional questions from contests when they appear on the same page.	Leave as is: Overall expert input favors pace and consistent placement of content over page breaks for differentiation. Strive to keep the number of pages to a minimum while not breaking a contest or question onto another page.
Navigation	25	One expert questioned the production and budget impact of an 18"-long ballot.	The contractor recognizes that most manufacturers offer different ballot lengths and that officials have budget restrictions. By prioritizing minimum VVSG-required text sizes and navigational cues, voter usability is emphasized.
	26	One expert questioned the production and budget costs and user impact of a five-page ballot format.	See above.
	27	Increased ballot pages will require ballot boxes to be emptied more frequently, which may increase error rates or the perception of increased errors.	Prioritize readability and usability of the ballot over election management issues.
	28	"Continue voting next side" should be more clearly distinguished from surrounding text.	Make text bolder or bigger.

Research summary (continued)

Simple language	29	The term "Retain" may not be understood by all voters and should be simplified.	Consider using the term "Keep."
	30	Edit content throughout for simplicity and consistency.	While this simplifies the ballot, it also puts the onus on election officials and voters to have dialogs about this information before Election Day.
	31	California law limits measures to 75 words in the ballot.	Simple-language experts edited the NIST-based instructions and labeling. Variables such as constitutional questions were not reviewed but continue to pose a core usability problem for participants in the studies.
Multiple languages	32	There was some concern about the hierarchy implied by differentiating English and a second language in bold/plain text; it may actually be a legal requirement to present both languages in an identical manner.	Limit text to one language per ballot, when possible. When necessary, use the two-language template, developed with the support of literacy experts. This template uses bold text to distinguish one language from another when they share an alphabet (such as English and Spanish). No bold text is required, however, when alphabets differ (such as English and Chinese). English does not need to be the first language in the sequence.
	33	Political party names must be translated.	Implement this change.
	34	The samples sent to the Language Working Group Asian representative did not include an Asian-language translation.	Materials were sent to AIGA China for a review and a second pass at translations. These final materials are used in the best practices document.
	35	On two-language ballots, one expert suggested stacking languages horizontally rather than side-by-side.	This treatment was used successfully in the Colfax County, NE, pilot study, but testing with literacy experts indicated a preference for side-by-side display.

Next steps

— Refine designs to support final best practices.

— Begin documentation process.

Event eight: Rolling DRE usability evaluations

New York, NY
December 1, 8, 9, 2006

Overview
Usability sessions were held at AIGA offices in New York City. The contractor worked with representative voters to test refinements made to the interactive prototype based on feedback from the first round of evaluations.

Materials studied

Voter information	
Optical scan ballots	
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	●
	Learnable	●
	Credible	●
Clarify production requirements	Scalable	
	Flexible	
	Reusable	
Clarify legislative requirements		
Clarify standards requirements (non-legislative)		
Clarify existing practices		

Methodology overview

Expert interviews	
Expert feedback on prototypes	
Usability evaluations	●
Observations	
Field interviews	
Reviews (non project materials)	

Participants
Fifteen representative voters between the ages of 22 and 64 years, both men and women, were studied. To achieve a random sampling, no special recruiting was done to limit language skills, education, income, or cultural identity.

7.37	Nine research events	Events	Event eight

Ballot summary

Topic	ID	Finding	Conclusion
Election information	1	Displaying the date on each page seemed repetitive for some participants. Some also noticed that the date was listed as dd/mm/year rather than typical U.S. standard mm/dd/year.	Remove date with the exception of introductory pages. Dates should be presented in standard U.S. format.
Contest information	2	Election banner is not considered a valuable use of space.	Remove "general election" label. Instead, display page-specific information such as "Contests," "Retentions," "Referendums," and add category information such as State, County, Local…
	3	"Retention" as a title is confusing.	Display name of judge and office as the title.
	4	Participants missed the countdown feature.	"More than three" and the tally that counts remaining options should be displayed together and emphasized with color, bold text, or a graphic treatment.
	5	Some participants did not notice the first "Vote for three" contest, even after prompting.	Atypical instructions should be bold or colored to draw attention, particularly when a user can vote for more than one candidate.
	6	Accept and Reject language is considered intimidating, if not confusing.	Instructions on ballot measure should say "choose yes or no."
	7	Instructions should be accurate, clear, and succinct.	Have simple-language experts review materials for final approval to ensure ease and accuracy in the final prototype.
	8	Participants were confused when content and format of instructions was inconsistent.	Create parallel sentence structure across all instructions.
	9	A number of participants felt the (!) was a sign of danger or error. It reminds them of a yellow warning triangle or computer error message.	Possibly change (!) to another symbol.
	10	Overall ballot felt "too gray" (not enough contrast).	Highlight instructions or voting instructions to improve contrast and hierarchy.
Contest/selection data	11	Most people were easily able to touch candidate name, but not the box in front of the name. Some felt that there should be more space between candidate names.	Confirm that touchscreen buttons meet industry standards in general, and best practices proposed in 2005 VVSG in particular.
	12	Many participants touch the empty box before the name. These squares are confusing when inactive.	Show box and check only when a selection is made, or make boxes and candidate names active.
	13	Some experts were confused when two candidates were listed on one button. They did not recognize the option as a ticket.	Explore design treatments to ensure that both names are easy to read.
	14	One person was confused when the Next button changed to "Skip." She indicated that "Skip" is a choice, not a navigational element. Note: No one demonstrated problems with this, but it was mentioned.	Reexamine the placement and functionality of "Skip" in the process. Voters will be allowed to skip votes, but the process needs to be clearer to them.

Ballot summary (continued)

Contest/selection data (continued)	15	Some experts wanted more control over the listing of candidates.	Add or recommend "Sort by name" button above candidate names, "Sort by party" button above party labels. Alternately, or in addition, recommend in best practices document that candidate names be programmed for random ordering.
	16	Make sure text on all buttons is the same size/treatment throughout the prototype and ensure that text size changes appropriately when adjusted by user.	Baseline button treatments in the next round of development or address in best practices document.
	17	The prototype, based on NIST's moderately complex ballot, has short enough contests that all candidates fit on one page. Longer lists of candidates, which will require a scrolling option on contest pages, as well as referendums must be considered.	Revise button length to accommodate for scroll bars on candidate lists. Demonstrate how scrolling (and scroll buttons) will function on contest pages.
	18	Current prototype is optimized for text that meets VVSG standards but not for large-text option.	Test contest pages for most complex scenarios, including largest text option selected and a large number of candidate names on a ticket race, to ensure fit.
Navigation	19	Participants got lost when moving between Selection, Review, and Help screens.	Consider offering only the contest selected from Review page and forcing voters back to Review screen. This has pros and cons. Make navigation within the prototype more intuitive. Improve the scrolling pace.
	20	Few (3 of 25) noticed the progress indicator in its current placement, but once it was brought to users' attention, they found it helpful.	Move the progress indicator so that Next and Back look more like an integrated unit. Label contest titles with screen number/count or provide more visual indicator of placement within ballot (i.e., an actual progress bar or thermometer-like visual). Also consider adding titles that reference contests, retentions, referendums at national, State, local levels.
	21	Participants were confused about where to touch on the Next/Previous buttons. A number suggested that the buttons should be shorter (arrow closer to label).	Adjust button length and typography to present as a more integrated unit and reduce unnecessary use of space.
	22	Six of the fifteen people tested were confused by the scroll bars. Either they didn't see them, didn't know how they worked, or the scroll bars did not function as they expected.	Reevaluate the functionality, placement, and visual appearance of scroll bars. Also consider pagination models as an alternative.
	23	Participants consistently requested better labeling to indicate that more text was available. Many did not notice incomplete text or scroll bars.	Add "UP" for more text, "DOWN" for more text with arrows, and change the appearance of the arrows to draw appropriate attention to them.
	24	The pace of the scrolling mechanism is inconsistent from one area of the ballot to the next. The review screen scrolling is very fast and considered disarming. It also stops without contest information fully visible.	Improve the scrolling pace. Referendums should scroll line by line, and one line should be highlighted to fully support low-literacy voters.
	25	All participants missed the green Confirm button on the language selection page.	Confirm button should gently pulse to teach voters where primary navigation is located.
	26	When leaving the Help area, people expected "Return to ballot" to take them to the contest they were previously viewing, either on the review screen or on selection screens.	Rethink ballot/help use cases throughout.

Ballot summary (continued)

Navigation (continued)	27	Missing "Cast" command in ballot prototype.	Add Cast Your Ballot button to final screen.
Write-in	28	Functionality of the Delete button is unclear.	Reevaluate user interface for simplicity. Consider removing Delete and Reset buttons.
	29	Some users had difficulty changing a misspelling on the write-in page because arrow buttons didn't behave as expected. People expect the Delete button to delete the letter just to the left of the cursor, but it currently deletes the letter to the right of the cursor.	Clarify/refine functionality.
	30	Participants often asked if they needed to add a first and last name—this could be because of the testing situation, but it came up often.	Provide caption under text field "Please enter a first and last name."
	31	One user expected to see a pop-up window with the contest still visible beneath it when adding a write-in candidate.	Consider pros and cons of an isolated screen and the introduction of pop-ups, which may be confusing to novice computer users and is less common in touchscreen samples.
	32	A number of participants said they didn't understand what would happen when they touched "Submit." After trying it, the action was clear. Some thought it should be more explicitly labeled.	Review instructions strategy with simple-language specialists.
	33	Some users to struggled to find the space bar.	Call more attention to the space bar.
	34	A number of participants pointed out that screen does not have characters needed for foreign names, such as accent marks, etc.	Include keyboard tip in language requirements in best practices.
Language selection	35	There was come confusion about the titles on the Language, Help, and Selection pages when instructions were in different places.	Titles and instructions should be presented similarly throughout.
	36	Vote graphic was considered appealing but function was unclear.	Move or eliminate the Vote graphic to avoid confusion. Consider eliminating the Confirm step when selecting a language. Users should be able to select language and move to next step in one touch.
	37	Some users noticed small inconsistencies in the prototype's interface: text, button placements, etc.	Text in language buttons should be flush left as on other buttons. All titles and buttons should adhere to a set grid system. Buttons on start pages should adhere to same grid system as used on selection pages.
	38	Some participants wanted a clearer indication that they had moved from introduction pages to the voting process.	Consider changing the background color to be consistent with help area and prep screens but different than the selection screens.
	39	Not in current prototype.	Add this page. Offer voters options such as "If you want to start voting now, touch Start," "If you want to change your settings or learn more about how to vote, touch Help."

Ballot summary (continued)

Straight party vote	40	Functionality is confusing for many participants, and instructions do not adequately clarify or inform users about this option.	Revise text as follows: "A straight-party vote means you vote for everyone on this ballot in that party. You can also choose a straight-party vote and then choose a person running in another party for one or more offices. Your vote for that person will be counted instead of your party vote in that office. To choose a straight-party vote, touch a party name. A checkmark will appear. You can undo your choice by touching the checkmark again. To change your vote, touch a different party. After you are done voting for party contests, remember to vote for judges and ballot measures beginning on screen 17."
	41	Some participants thought they would be done with the voting process if they used the straight-party option.	Draw attention to measures. Add an instructional paragraph that addresses this issue and place the Attention icon nearby to add emphasis.
	42	Some users wanted to change languages midstream but couldn't use the "Previous" button to do so.	Consider making settings adjustments available on each page.
Help	43	Instructions for how to change languages were not necessary—the touchscreen functionality should make the process obvious.	Remove term "Touch language below" and add English as an option.
	44	Participants were somewhat confused about their location in the experience. Some thought they were voting when they were in help mode, and some didn't notice when they moved from help back to the ballot.	Add title banner that says "Help." Change background color to be different than contest/ selection pages.
	45	The left navigation was confusing for some participants. Some users indicated that the labeling/organization of content could be simplified.	Restructure content hierarchy and revise button layout.
	46	Most participants thought three text sizes were unnecessary and recommended large and small.	Offer two text sizes that meet 2005 VVSG standards and address issues of low vision or tunnel vision.
Summary	47	Many users appreciated the idea of a review screen, but few felt it met their expectations of a summary view. A number of people commented on the poor use of space and stated that for a summary it didn't feel very summarized.	Selected candidate name and party should be displayed in the center column with the Change My Vote button to its right for a more concise use of space.
	48	Participants commonly requested easy access to the contest or screen they had previously visited.	Allow users to navigate back to previous contest or help screens.
	49	Participants had difficulty understanding their next step after moving from the summary screen to a contest screen—many wanted to return to a summary page to pick up where they left off.	Consider showing only the selected contest in isolation when coming from the summary page. On a selected contest, remove all bottom navigation except "Help" and "Return to Summary" when coming from summary page.
	50	Summary page is missing instructions.	Add instructions and summary at the top of the page and a contests completed counter to the left column following the pattern established on selection pages.

Ballot summary (continued)

Summary (continued)	51	Summary page is missing a title.	Add title to the top of the page following the pattern on selection pages and the help area.
	52	Some participants were confused about their place in the ballot. It was not understood whether they were voting or reviewing.	Add category titles as introduced on selection pages, such as Contests: National, State, Local; Retentions; and Referendums. Color change either in title or background to indicate review area to distinguish from the voting screens.
	53	Missing progress indicator after selecting cast ballot.	Add progress indicator review > print > cast ballot.
Printing	54	Deemed as necessary by participants and the team but not yet built into the prototype.	Define and demonstrate process. Suggest message while printing is in progress to the effect of "Your selections are printing. Please confirm accuracy of the print ballot against the choices you've made on the screen. If you are satisfied with your choices and the accuracy, touch Cast My Ballot. If you would like to make changes, return to the review screen. .... go back. If you feel the print receipt is inaccurate, contact a poll worker."
Confirmation	55	Deemed as necessary by participants and the team but not yet built into the prototype.	Add print/confirm cast functionality. Add message after the ballot has been cast to the effect of "Thank you for voting today. Your ballot has been successfully submitted and counted in this election."
Miscellaneous	56	Some participants seemed unimpressed with screen appearance. It was suggested by more than one participant that the presentation looked computer-generated and not designed. Note: These participants usually mentioned the font selection as part of the problem; and Univers (the recommended font) was not displayed as designed in all cases.	Refine design.
Simple language	57	"Vote for one" language sounds like a command and doesn't imply that users have the opportunity to skip. Instructions need to make this clear.	Have simple-language experts review materials for final approval to ensure ease and accuracy given final prototype.
	58	Referendums were stressful and difficult for everyone to read. "If we can't understand them, how can design help?" Ballot measures appeared "very gray" (not enough contrast).	Consider a white or lighter gray background to make text easier to read. Increase leading. Add note in instructions that type size can be increased for easier reading
	59	Many recommended summary sections at the beginning of the long ballot measure screens.	Consider adding a tab structure as a possible means of breaking text into smaller, predictable, organized content areas. Tabs could be Summary (default), Proposer, Financials, Schedule, and Detail.

Next steps

— Refine designs to support final best practices.

— Begin documentation process.

Event nine: Expert reviews of rolling DRE ballots

December 21, 2006

Overview

The contractor offered rolling DRE prototypes to the team's panel of experts, election officials, and most prevalent ballot manufacturers for evaluation and feedback.

Materials studied

Voter information	
Optical scan ballots	
Full-face DRE ballots	
Rolling DRE ballots	●

Research goals

Clarify user requirements	Usable	●
	Accessible	●
	Language	●
	Legible and readable	●
	Learnable	●
	Credible	●
Clarify production requirements	Scalable	●
	Flexible	●
	Reusable	●
Clarify legislative requirements		●
Clarify standards requirements (non-legislative)		●
Clarify existing practices		●

Methodology overview

Expert interviews	●
Expert feedback on prototypes	
Usability evaluations	●
Observations	
Field interviews	
Reviews (non project materials)	

Participants

— The contractor's panel of experts
— Elections officials
— Manufacturers

7.43	Nine research events	Events	Event nine

Rolling DRE ballot summary

Topic	ID	Finding	Conclusion
Overall	1	Overall design is clean and weighted with the right amount of color to support the interaction design.	Check for red and green to confirm choices meet color blindness requirements.
Overall	2	Sections within the ballot are unclear. Differences between partisan and nonpartisan contests may not be distinguishable.	Must help the voter understand transitions from one contest area to the next.
Overall	3	Greater variety in type size and weight will improve readability.	Titles should be larger.
Ballot instructions	4	There are no overall ballot instructions.	Suggest some A/B testing with voter instructions.
Language selection	5	Are different language selection buttons in English?	Confirm that all language buttons are presented in selected language, not in English.
Language selection	6	No need for the Begin button.	Remove Begin button.
Straight-party vote	7	Language for screen could be simplified.	"To vote, touch a name. A checkmark will appear. To undo your choice, touch the checkmark. It will disappear. To change your vote, touch a different name." "Remember to vote for judges and ballot measures beginning on screen 17."
Contest information	8	Titles should be larger for easy reading.	Increase title size.
Voting instructions	9	Instead of using "one," use "1."	Change throughout ballot.
Voting instructions	10	Expert quote: "For the write-in, I like the idea of having instructions on the button itself."	Confirm that this is applied throughout ballot.
Voting instructions	11	See conclusion (at left) for expert-recommended language for a "Vote for 1" (single candidate).	"To vote, touch a name. A checkmark will appear. To undo your choice, touch the checkmark. It will disappear. To change your vote, touch a different name." On the Write-in Button: "Touch here to write in another name."
Voting instructions	12	See conclusion (at left) for expert-recommended instructions language for "Vote for 1" (dual candidates).	"To vote, touch one set of names. A checkmark will appear. To undo your vote, touch the checkmark. It will disappear. To change your vote, touch another set." On the Write-in button: "Touch here to write in other names."

Rolling DRE ballot summary (continued)

Voting instructions	13	See conclusion (at left) for expert-recommended instructions language for "Vote up to X."	"To vote, touch a name. A checkmark will appear. To undo your vote, touch the checkmark. It will disappear." On the Write-in button: "Touch here to write in other names."
Voting instructions	14	See conclusion (at left) for expert-recommended instructions language for questions with two choices.	"To vote, touch a name. A checkmark will appear. To undo your vote, touch the checkmark. It will disappear." On the Write-in button: "Touch here to write in other names."
Ballot review	15	Expert quote: "It is unusual to see the pronoun 'you,' but testing may prove that this pronoun is motivating to voters. We do have doubts about the big red exclamation mark, and even the exclamation after the sentence. However, the consensus is that this should work well, and it sounds like you've done some testing, so I withdraw my recommendation."	"To change your choice, touch the other choice. To undo your choice, touch the checkmark. It will disappear."
Help	16	Expert quote: "I strongly recommend that the settings be separated from Help and provided in two places: before voting—on the 'Choose language' screen, perhaps—as well as its own button on every screen. I'm wondering if both Help and 'Settings' buttons should have a symbol (like a '?') on each button with the text."	Rethink cases involving help and settings to provide better support.
Help	17	Expert quote: "I support use of video or animated demonstration to support low literacy. Alternative audio is also likely to be needed."	Tutorials and demos should be engaging for voters. Based on standard practice in learning software, consider supplementing clear, concise instructions with animations and audio.
Miscellaneous	18	The control for audio might be more efficient and intuitive as a touch slider.	Hardware manufacturers should handle audio adjustments.

Next steps

— Refine designs to support final best practices.

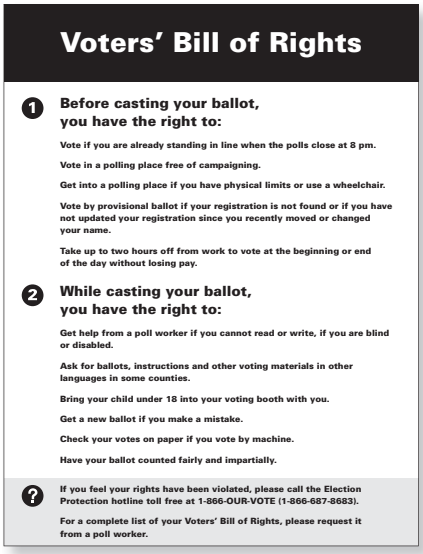
— Begin documentation process.

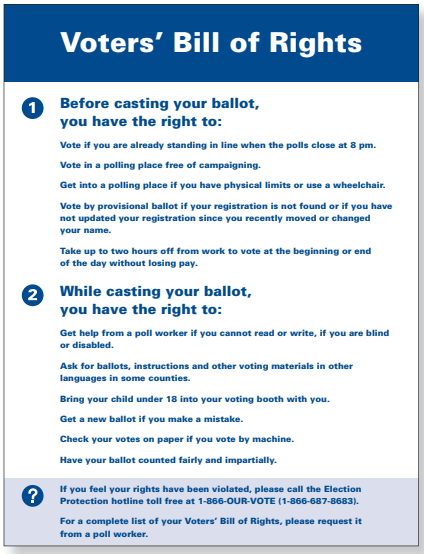
Design development

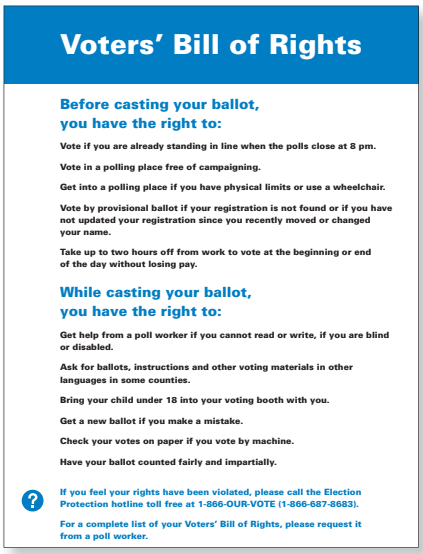
Samples of election designs, based on input from research findings, are illustrated on pages 7.45–7.54.

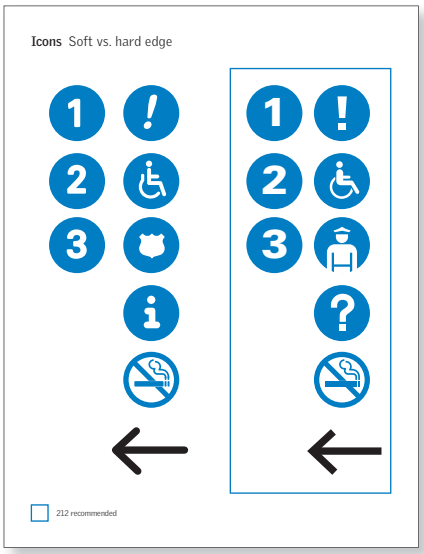
Voter information color and icon studies

To aid usability and readability, icons, functional typography, and ADA-compliant colors were consistently applied. Nebraska pilot test voter feedback further informed the design development.









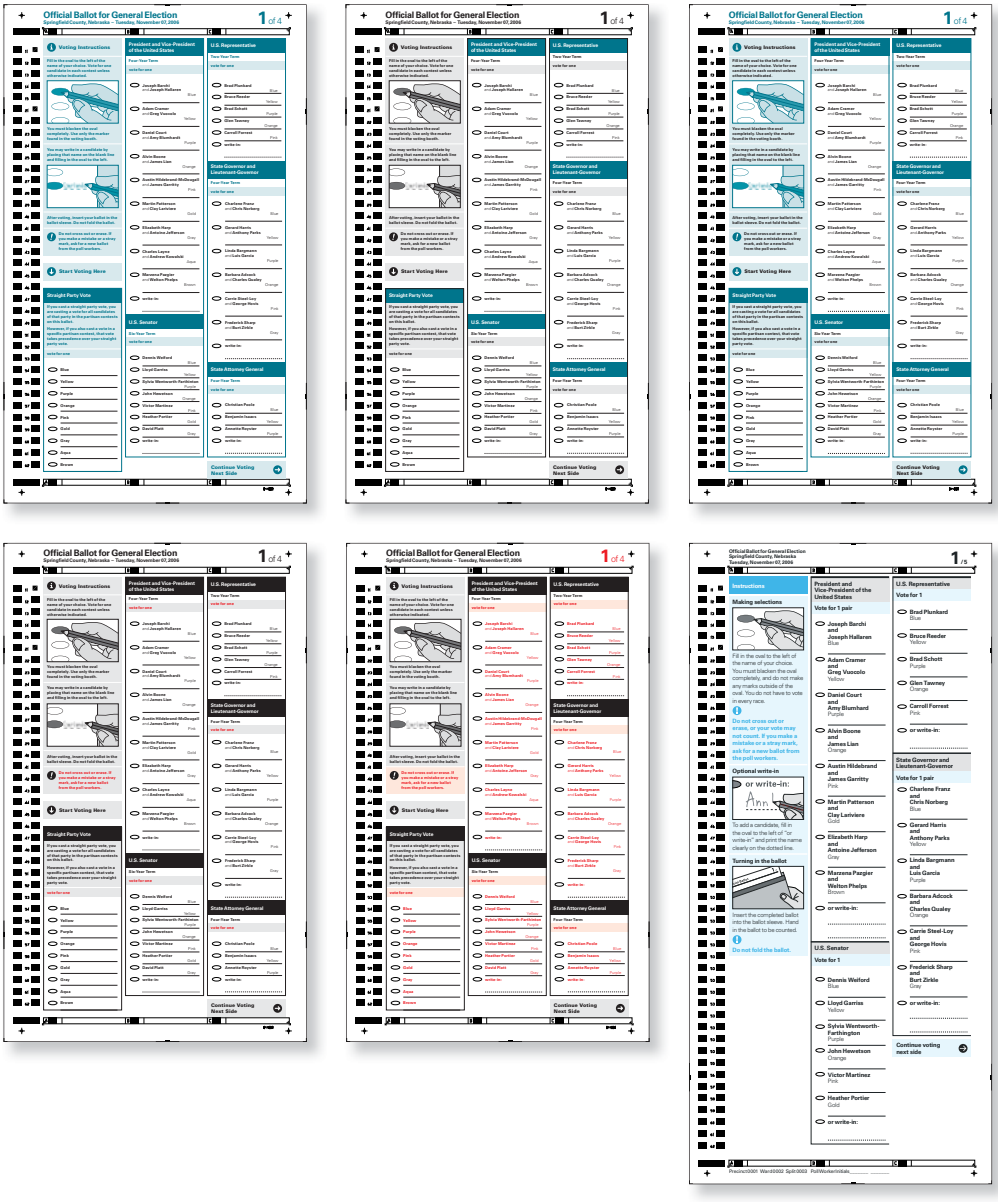
Optical scan ballots

Possible solutions for improvement of optical scan ballots for low-literacy voters are shown on pages 7.46–7.50. The process was iterative, with each successive design revised based on user input. Techniques to aid low-literacy voters include:

— Using color to support usability
— Using icons to support usability
— Displaying content (especially ballot measures) in two languages simultaneously
— Visually aligning contests and instructions.

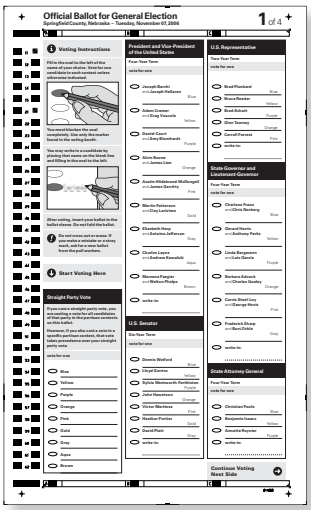
Color studies

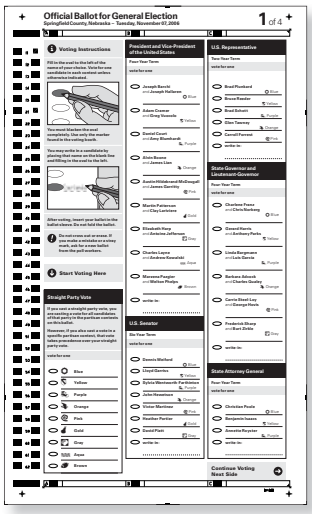
With domestic and international precedents for using color on ballots, options were tested that used color to improve usability—specifically, to emphasize and clarify ballot instructions. ADA-compliant colors were used.

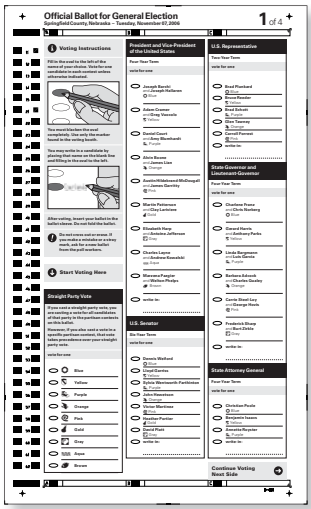


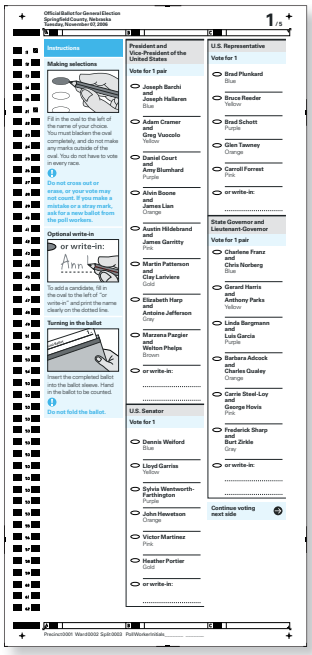
Icon studies

Due to the popularity of adding party icons to ballots in some U.S. jurisdictions, party icons were integrated into several samples and reviewed. Literacy and design experts agreed that the benefits of potentially identifiable party images (always coupled with party names) were outweighed by the extra visual, cognitive, and political information demands required for voter understanding.



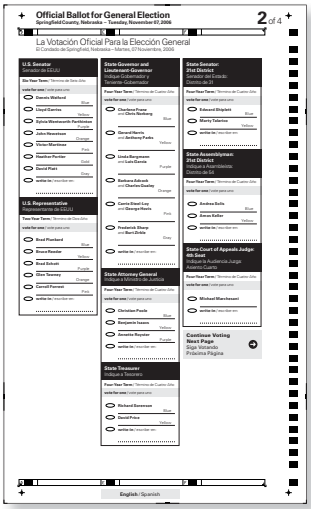


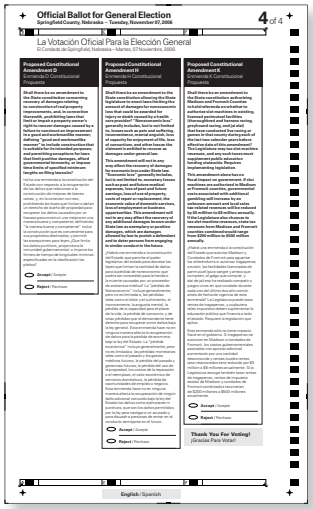


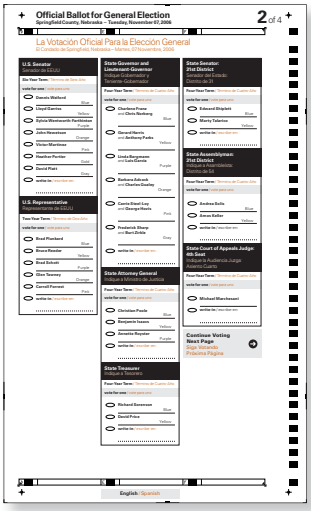


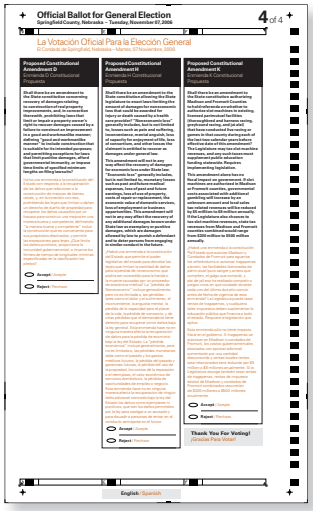
Ballot measures and multiple-language studies

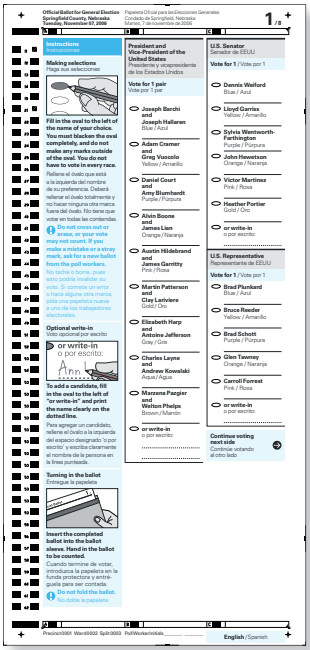
To clarify the usability of two-language ballots, especially in ballot measure content, the contractor examined variations in text layout, line length, text line spacing, and sequencing of content. Font weights and sizes were also studied to reinforce the readability of two languages and different alphabets.

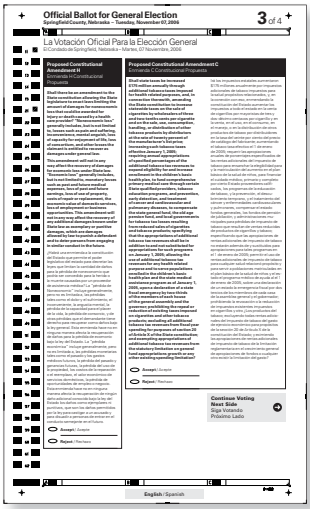






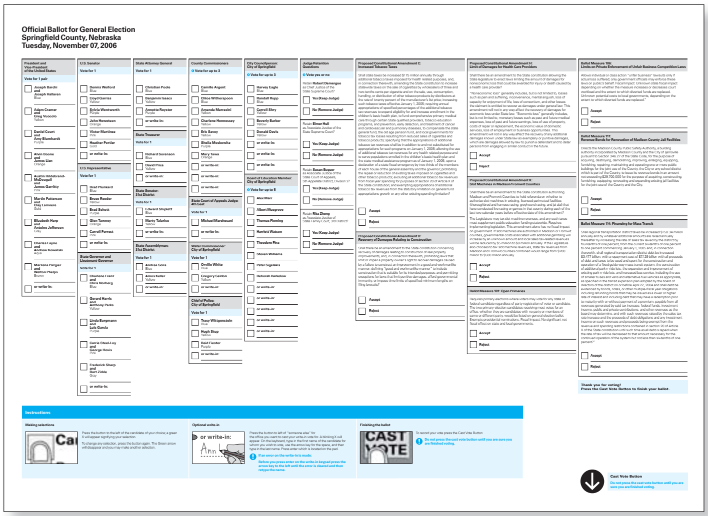


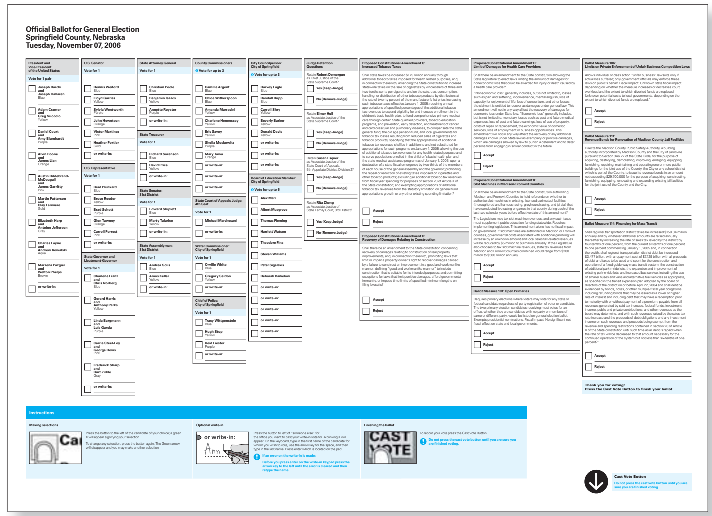


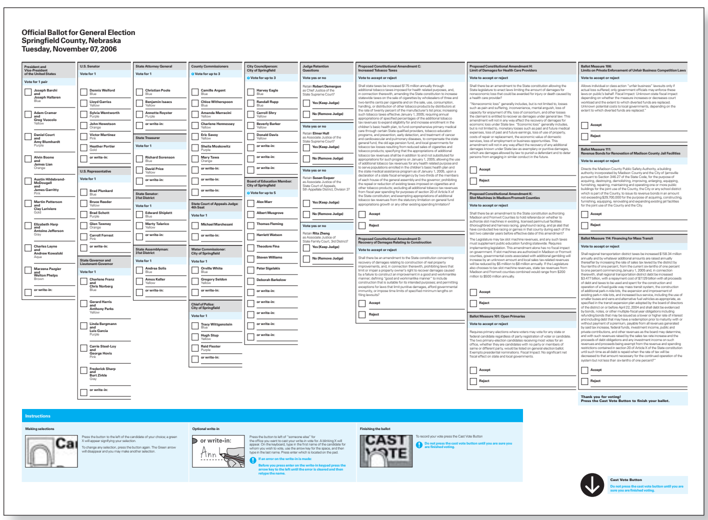

Official Ballot for General Election
Springfield County, Nebraska – Tuesday, November 07, 2006
3 of 4
La Votación Oficial Para la Elección General
El Condado de Springfield, Nebraska – Martes, 07 Noviembre, 2006
Proposed Constitutional Amendment H
Enmienda H Constitucional Propuesta
Proposed Constitutional Amendment C
Enmienda C Constitucional Propuesta
Shall there be an amendment to the State constitution allowing the State legislature to enact laws limiting the amount of damages for noneconomic loss that could be awarded for injury or death caused by a health care provider? "Noneconomic loss" generally includes, but is not limited to, monetary losses such as past and future medical expenses, loss of past and future earnings, loss of use of property, costs of repair or replacement, the economic value of domestic services, loss of employment or business opportunities. This amendment will not in any way affect the recovery of any additional damages known under State law as exemplary or punitive damages, which are damages allowed by law to punish a defendant and to deter persons from engaging in similar conduct in the future.
¿Debe haber una enmienda a la constitución estatal que permita que la legislatura estatal promulgue leyes que limiten el monto de los daños por pérdidas no económicas que puedan ser otorgadas por lesiones o muertes ocasionadas por un proveedor de atención médica? Las "pérdidas no económicas" generalmente incluyen, pero no se limitan a, pérdidas como dolor y sufrimiento, molestias, angustia mental, pérdida de capacidad para disfrutar de la vida, pérdida de consorcio, y otras pérdidas a las que el demandante tenga derecho a cobrar como daños según la ley general.
Esta enmienda no afectará en modo alguno el reconocimiento de daños por pérdidas económicas establecido en la ley estatal. Pérdida económica" generalmente incluye, pero no se limita a, pérdidas monetarias tales como gastos médicos pasados y futuros, pérdida de ingresos pasados y futuros, pérdida del uso de propiedad, costos de reparación o reemplazo, el valor económico de los servicios domésticos, la pérdida de oportunidades de empleo o negocio. Esta enmienda no afectará en modo alguno el reconocimiento de cualquier daño adicional conocido según la ley estatal como daños punitivos o ejemplares, que son daños permitidos por la ley para castigar al demandado y evitar que otras personas participen en conductas similares en el futuro.
Accept / Aceptar
Reject / Rechazar
Continue Voting
Next Side
Siga Votando
Próximo Lado
English / Spanish

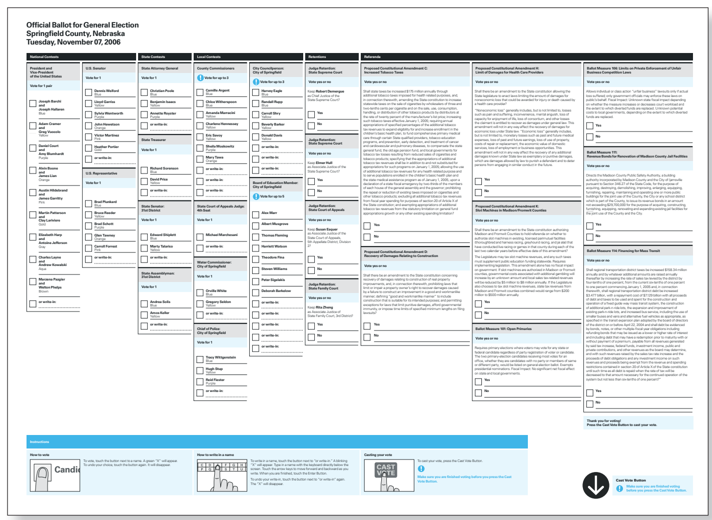
Full-face DRE ballots

Test participants preferred viewing contests aligned across the top for readability in optical scan findings. This alignment has been applied to the full-face ballot samples.









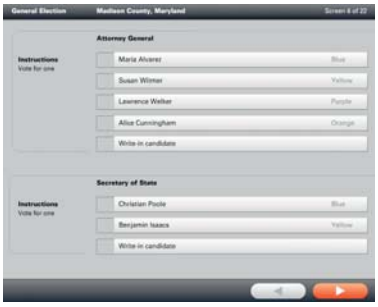
Rolling DRE ballot interface design

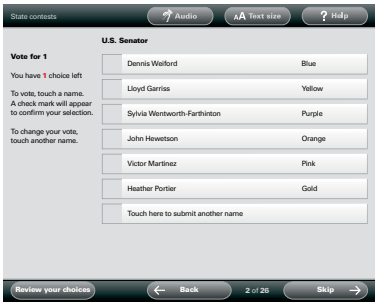
Studies of the components and interactions found most challenging by test participants are illustrated on pages 7.51–7.53. These include:

— Comprehending the total number of contests per screen
— Comprehending the differences between single candidates and two-name tickets
— Understanding the difference between "vote for 1" and "vote for x" contests
— Navigating through and voting on ballot measures
— Reviewing the ballot sufficiently before casting
— Understanding and accessing Help features
— Navigating through the ballot

Contests per screen

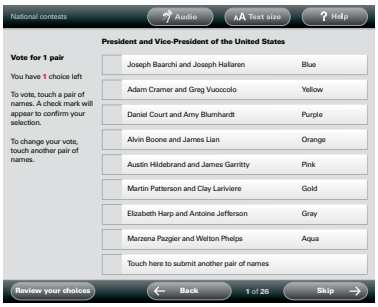
When space allowed, initial designs showed two contests per screen. The first interactive prototype developed for testing revealed undervoting on the second contest. Changing to one contest per screen, participants were observed to be more aware of each contest without feeling that the ballot was too lengthy.





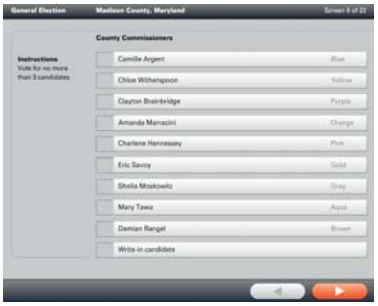
Contests with two names

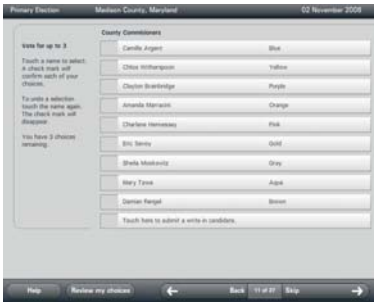
To underscore the difference between one-name and two-name contest options for voters, the team explored button treatments varying in font size and weight; placement of candidate and party names; button spacing and layout; and highlight states (when a selection has been made). Navigation varieties were also considered.

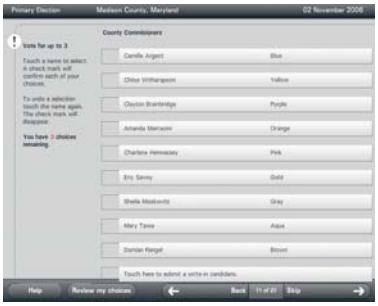


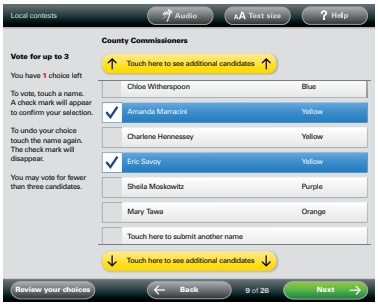
Voting for multiple candidates in one contest

To underscore the difference between single-candidate contests and multiple-candidate contests, focus was placed on the language of screen-level instructions, and a countdown indicator to communicate undervoting risks was added.



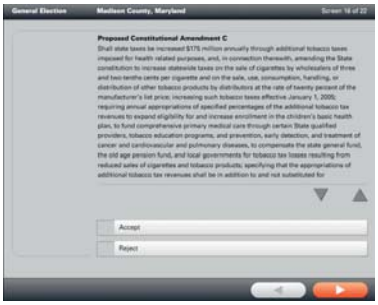


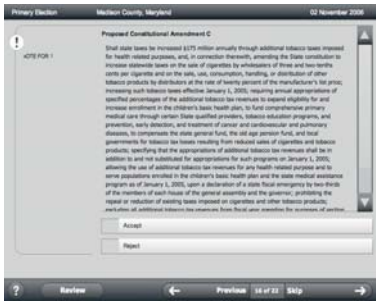


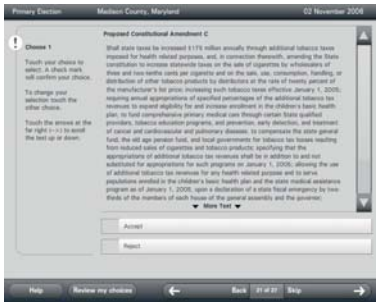


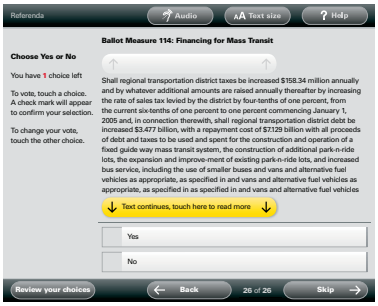
Reading ballot measures

To encourage users to successfully access and read lengthy ballot measure text, the contractor studied variations in titling, scrolling, breaks in the text, type treatment, type size, line spacing, and options for presenting and communicating ballot measure instructions.



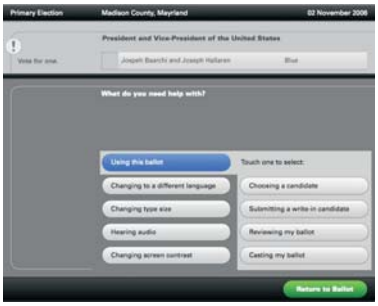


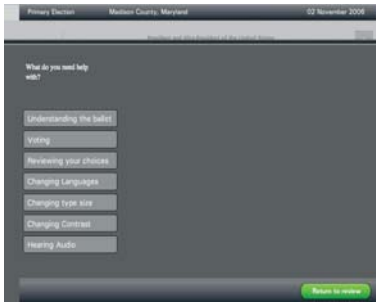




Receiving help

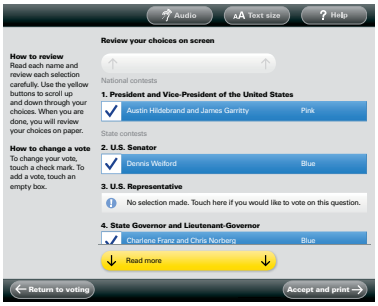
On the strength of recommendations by low-literacy advisers, the team explored options for integrating support content into the rolling DRE user experience.





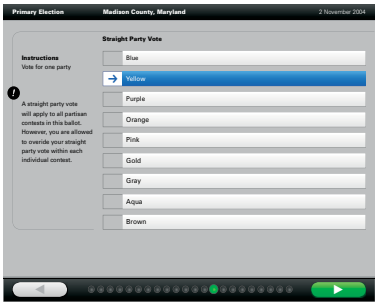
Reviewing the ballot

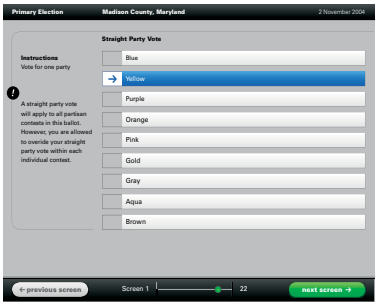
Usability studies indicated that voters generally prefer to monitor their ballot completion progress while voting. Some participants requested the ability to (knowingly) skip ahead to decisions they deemed most important. Review screens should allow voters to accomplish both by offering an in-progress ballot summary and nonlinear access to contests and measures. Design iterations and usability testing explored navigational flows connecting voting, reviewing, and casting activities.

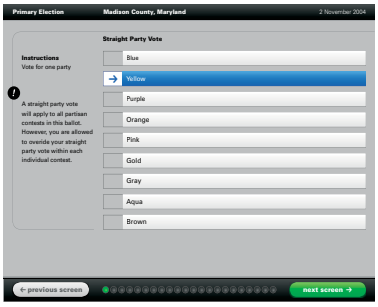


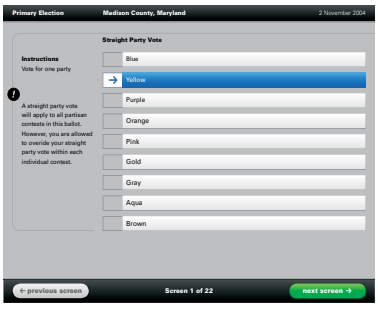
Navigating through the ballot

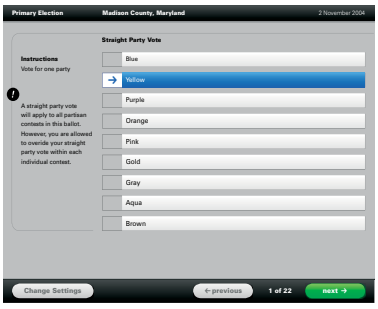
Language, graphics, layout, and symbols were investigated to help determine the best ballot navigation presentation.

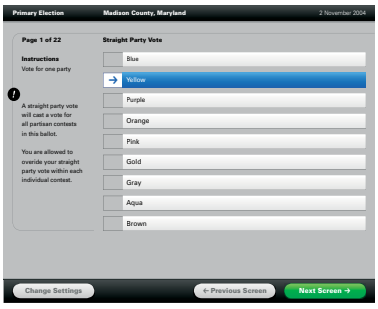












Effective Designs for the Administration of Federal Elections

Section 8: Appendix

June 2007

U.S. Election Assistance Commission

About AIGA / Design for Democracy

About AIGA

AIGA, the professional association for design, is the oldest and largest membership association for design professionals engaged in the discipline, practice, and culture of designing. Its mission is to advance designing as a professional craft, strategic tool, and vital cultural force.

The organization was founded as the American Institute of Graphic Arts in 1914. Since then, it has become the preeminent professional association for communication designers, broadly defined. In the past decade, designers have increasingly been involved in creating value for clients (whether public or business) through applying design thinking to complex problems, even when the outcomes may be more strategic, multidimensional, and conceptual than what most would consider traditional communication design. AIGA now represents more than 19,000 designers of all disciplines through national activities and local programs developed by more than 55 chapters and 200 student groups.

AIGA supports the interests of professionals, educators, and students who are engaged in the process of designing. The association is committed to stimulating thinking about design, demonstrating the value of design, and empowering success for designers throughout the arc of their careers. Through conferences, competitions, exhibitions, publications, and Web sites, AIGA inspires, educates, and informs designers, helping them to realize their talents and to advocate the value of design among the media, the business community, governments, and the public.

About Design for Democracy

Design for Democracy is a strategic initiative of AIGA. The organization's goal is to increase civic participation by making experiences clearer, more understandable, easier to accomplish, and more trustworthy. Design and social research professionals collaborate to enable compelling, efficient, and trust-building experiences between government and the governed.

Contributors

Accessibility Experts
Ann Taylor, American Federation of the Blind
David Baquis, Access Board
Diane Golden, Missouri Assistive Technology
Dr. Richard Deluca, Eye Institute of New York
Jim Dixon, American Association of People With Disabilities
JR Harding, Access Board
Nancy George, AARP
Steven Booth, American Federation of the Blind

Election Officials
Alexia Scott Morrison, Nebraska
Brett Rowley, California
Carmine P. Casciano, New Jersey
Dawn Roberts, Florida
David Dowling, Nebraska
David Orr, Illinois
David J. Shively, Nebraska
Howard Sholl, Delaware
Glen Takahashi, Hawaii
Guy Mickley, Maryland
Jim Henson, Minnesota
Joanne Armbruster, New Jersey
John Lindback, Oregon
Julia Keh, California
Kathy Rogers, Georgia
Keith Cunningham, Ohio
Linda Lamone, Maryland
Mary Kiffmeyer, Minnesota
Richard Lynch, New Jersey
Scott Burnham, Illinois
Sharon Bohaboj, Nebraska
Sharon Turner-Buie, Missouri
William Campbell, Massachusetts

Language/Reading Experts
Amy Gendler, AIGA China
Bill Tilghman, Compass Languages
Dana Chisnell, UsabilityWorks
Ginny Redish, Redish & Associates, Inc.
Glenn Magpantay, Asian American Legal Defense and Education Fund
Josephine Scott, Redish & Associates, Inc.
Judy Trupin, Queens Borough Library, Adult Services
June Crawford, National Institute for Literacy
Leo Brenninkmeyer, Compass Languages
Roberto Cruz, Queens Borough Library, Adult Services
Susan Dalmus, Queens Borough Library, Adult Services
Veronica Belsuzarri, Illinois
Wang Yun, AIGA China

Researchers, Designers, and Election Design Experts
Cheyenne Medina
Dori Tunstall, Design for Democracy
Gretchen Schulfer
Jim Vermillion, International Foundation for Election Systems
Joe Sparano
Marcia Lausen, Design for Democracy
Michael Dennis
Sharon Laskowski, National Institute of Standards and Technology
Terezia Matus, International Foundation for Election Systems
Veronica Belsuzarri, Illinois

Manufacturers and Printers contacted
Adam Carbullido, Elections Systems & Software
Darrell Aubrey, Hart
Donnetta Puckett, Diebold
John Groh, Elections Systems & Software
Howard Cramer, Sequoia
Michelle Schafer, Sequoia
Progress Printing, New Jersey
Shari Little, Elections Systems & Software
Skip DeBiase, Phoenix Graphics
Steve Bolton, Elections Systems & Software
Veronica Spencer, Sequoia
Zane Smith, Diebold

Core Project Team
Douglas Brown
Drew Davies
Elizabeth Hare
John Emerson
Julie Park
Laura Varacchi
Luke Woods
Mary Quandt
Matthew Terdich
Michael Konetzka
Kelly McLaughlin