Results and Findings

Project Name:
ADA Compliance - Ohio Secretary of State
Project Overview

The State of Ohio tasked Lochbridge to investigate what efforts would be required as a first-step in their long term plan to bring the entire Secretary of State website into compliance with the current best-practices for accessible web content.

During this first phase we scanned all of the URLs referenced in the original sow (see: url list) to identify all violations within each page. During this scan we utilized the Firefox Web Accessibility Tool, Sortsite as well as manual code checks and screen reader testing. During this testing we identified 18 compliance violations across all of the pages. Each of these violations is outlined below with details of what the issue is, what guideline is being violated as well as high level recommendations on implementing a fix.

Moving on from the web urls we looked into the PDF documents provided in the original sow (see: pdf list) and scanned all documents using Adobe Acrobat Pro’s built in Accessibility Toolkit. This toolkit allows the user to scan any PDF document against the current 508 / WCAG / ADA standards. Using this scanning tool in conjunction with manual checks of the reading order and screen reader testing, we identified 12 different issues. These violations include compliance issues as well as UX issues that will prevent content from being displayed properly.

For the video compliance portion of this project we manually inspected each of the video urls provided (see: video list) against the government provided 508 accessibility checklist. From our inspections we identified 7 compliance violations. Each of these violations as well as the recommended remediation is listed in detail in the following sections.

Our remediation recommendations are included in the Phase II Statement of Work document as well.

What is ADA / WCAG / 508 compliance?

The roots of web based accessibility standards can be traced back to the 1973 Rehabilitation Act which created a systemic government emphasis on creating an environment of equal opportunity with respect to individuals with disabilities. Section 508 of this document was expanded in 1998 to include web based technologies under the blanket of the Rehabilitation act. This law made it a requirement for all federal
information systems to follow guidelines to ensure that persons with disabilities would be able to access their services not online in their brick and mortar locations but also through all web based portals and websites.

The expansion of Section 508 brought into the limelight the issue of web accessibility and specifically of ways for web content creators to ensure that their information would be easily accessed by all people using a variety of different viewing methods. With this attention a group of private users formed the W3C and started building out a set of optional guidelines that would eventually turn into the WCAG standards for accessible websites and applications. These WCAG rules are not a requirement in the legal sense, but are best-practices for developers across the globe.

Future Issues to consider

The scope of this project allowed for a solid start towards full compliance with government guidelines. The current climate regarding accessibility however is moving more and more towards strict adherence being a more often enforced standard. Moving forward it is important that all edits and updates follow the guidelines in order to prevent having to do these types of audits every couple years. Making accessibility an important step in all web publishing will in the long run prevent these types of projects from having to be undertaken.

In 2015 the Obama administration and the US Digital Service released an alpha project to attempt to standardize all federal digital presences under a single, uniform design. These standards can be viewed at https://playbook.cio.gov/designstandards/. We believe that this type of ground up overhaul is soon going to become a requirement for state level architecture as well. Adopting a system like this and releasing it to the public could be a great way for the Ohio SOS to stand out on a national stage.

Software Used

Software used for this initial phase is broken down into the three following phases of our assessment.

1. Web
   a. Each web page url provided to us was scanned using the Firefox Assessment Tool as well as Sortsite compliance tester. Once these automated checks were completed a manual check was completed for pages flagged as having issues that could not be isolated by automated scanning, manual checking included screen reader tests.
2. **PDF**
   a. Each PDF document provided was scanned using the latest version of Adobe Acrobat to discover code related issues. Once these issues were outlined a manual check to discover reading order issues was completed using a screen reader.

3. **Video**
   a. Due to the visual nature of time-based content, automated software is for the most part unable to discover issues within the video. Each of the files and pages containing the files were inspected manually using the HHS provided 508 checklist for time-based content.
Web

Our development team worked to analyze and scan all of the provided URLs. During our analysis we discovered the following errors across many of the pages. Each error notated below outlines the issue as well as our suggestions for remediations. As with all development projects, there are multiple ways that each of these issues could be fixed and in some cases a complete rebuild is necessary for more critical errors.

1. This page has links to a PDF file, but does not provide a link to download Acrobat Reader.
   a. See section 1194.22(m) of the 508 Guidelines.

2. LABEL elements should not be blank.
   a. See the related WCAG sections: 1.3.1 Info and Relationships. (Level A), 4.1.2.

3. This LABEL refers to a non-existent control.
   a. See section 1194.22(m) of the 508 Guidelines.

4. This form has fields without LABEL elements or TITLE attributes.
   a. See section 1194.22(m) of the 508 Guidelines.

5. This form control has no programatically determined name.
   a. See the related WCAG sections: 1.3.1 Info and Relationships. (Level A), 4.1.2 Name, role, value.

6. All ONMOUSEOUT / ONMOUSEOVER handlers should have an equivalent ONBLUR / ONFOCUS handler.
   a. See the related WCAG sections: A F64.

7. Identify row and column headers in data tables using TH elements, and mark layout tables with role='presentation'.
   a. See the related WCAG sections: 1.3.1 Info and Relationships. (Level A), 4.1.2 Name, role, value.

8. This page has markup errors, causing screen readers to miss content.
   a. See the related WCAG sections: A F70.

9. Provide a way to skip navigation links
   a. See section 1194.22(o) of the 508 Guidelines.

10. The font and center elements must not be used for text styling, instead use structural markup should be used with CSS for styling
    a. Valid HTML Markup is required.
11. Heading elements (h1, h6) should be used for structuring information on the page.
   a. Context rich formatting helps screen readers understand information importance.

12. Each img element should have alt text.
   a. See the related WCAG A F65.

13. Each A tag must contain text or an IMG with an ALT attribute.
   a. See the related WCAG A F89.

14. Two or more levels of nesting.
   a. This is a UX issue causing screen readers to function improperly.

15. Each page must have a lang attribute on its html element whose value or initial subtag is a valid two-character language code.
   a. See the related WCAG (Level A), 3.1.1

16. This page has duplicate IDs which cause problems in screen readers.
   a. See the related WCAG A F77.

17. AREA tags must have an ALT attribute.
   a. See the related WCAG A F65.

18. All FIELDSET tags should be labeled with LEGEND tags.
   a. See the related WCAG A H71.
Identified Issue
This page has links to a PDF file, but does not provide a link to download Acrobat Reader.
In order to keep the experience simple and help users access required software, it is required that if a page contains PDF documents it must also have a link to download a PDF reader. This can be solved by adding the PDF reader download link next to all PDF links, or adding a universal PDF reader download across all pages.

Violation guideline: Section 508 1194.22 (m)

URLs to be resolved:
- http://sosclouds.cloudapp.net/
Identified Issue

LABEL elements should not be blank.

When screen readers move through the code of a page, label elements are used to define what the form control function does. Form functions that lack the label field become non-contextual and impossible to use while using a screen reader.

Violation guideline: WCAG 2.0 A 4.1.2
Failure description: WCAG 2.0 A F 68

URLs to be resolved:

- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/sos/LeqnAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQID.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/
Identified Issue

This LABEL refers to a non-existent control.

This happens when the FOR attribute doesn't exactly match a control ID, or targets a control NAME instead of a control ID.

Violation guideline: Section 508.1194.22 (n)

URLs to be resolved:
Identified Issue

This form has fields without LABEL elements or TITLE attributes.

Screen readers use LABEL elements or TITLE attributes to describe form fields to non-sighted users. Without these, forms are very hard to use with a screen reader. Forms designed to be completed online shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

Violation guideline: Section 508.1194.22 (n)

URLs to be resolved:

- http://voterekup.sos.state.oh.us/voterekup.aspx
- http://www.sos.state.oh.us/SOS/
Identified Issue:
This form control has no programmatically determined name.

Form controls are interactive elements that allow users to submit data and execute other functions. When accessing a website using a screen reader these elements become very important. Having a programmatically determined name allows screen readers to tell the user what the control does. Lack of support for this makes form controls impossible to use as they are read without any context.

Violation guideline: WCAG 2.0 A 4.1.2
Failure description: WCAG 2.0 A F68

URLs to be resolved:
- http://www.sos.state.oh.us/SOS/
- http://voterlookup.sos.state.oh.us/voterlookup.aspx
Identified Issue

All ONMOUSEOUT / ONMOUSEOVER handlers should have an equivalent ONBLUR / ONFOCUS handler.

Users accessing the site without the use of a mouse are required to use keyboard inputs for all actions. Without having handlers built for this purpose it becomes increasingly difficult for these users to navigate the website in an enjoyable fashion. Adding event handlers will allow these users to better use the site.

Violation guideline: WCAG 2.0 A F54

URLs to be resolved:

- https://olvr.sos.state.oh.us/ovru/ModifyAddress.aspx
- https://olvr.sos.state.oh.us/ovru/Modify.aspx
- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/sos/omw/MRV/QandA.aspx
- http://www.sos.state.oh.us/sos/legnAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://voterguides.sos.state.oh.us/voterguides.aspx
Identified Issue

Identify row and column headers in data tables not using TH elements, and not mark layout tables with role='presentation'.

Data tables allow screen reader users to understand column and row relationships. Without TH or ROLE, screen readers apply heuristics to decide whether a table is a layout table or data table. These heuristics vary greatly between screen readers, and are affected by the browser being used, window size, and font size (so the outcome is very unpredictable without TH or ROLE). If a data table has headers marked up using TD, then change these to TH. If a data table has no headers, add TH elements describing each row and/or column. If the table is only used for layout add role='presentation' to the TABLE element.

Violation guideline: WCAG 2.0 A 1.3.1
Failure guideline: WCAG 2.0 A F91

The simple remediation for this issue requires modifying HTML tag and attributes. They are critical elements of the web pages and may cause more issues. The time given are the minimum estimation.

URLs to be resolved:

* [https://olvr.sos.state.oh.us/ovru/ModifyAddress.aspx](https://olvr.sos.state.oh.us/ovru/ModifyAddress.aspx)
* [https://olvr.sos.state.oh.us/ovru/Modify.aspx](https://olvr.sos.state.oh.us/ovru/Modify.aspx)
* [http://www.sos.state.oh.us/SOS/publications.aspx#Elections](http://www.sos.state.oh.us/SOS/publications.aspx#Elections)
* [http://www.sos.state.oh.us/sos/omv/MRV/QandA.aspx](http://www.sos.state.oh.us/sos/omv/MRV/QandA.aspx)
* [http://www.sos.state.oh.us/sos/LegAndBallotIssues/BallotBoard.aspx](http://www.sos.state.oh.us/sos/LegAndBallotIssues/BallotBoard.aspx)
* [http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx](http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx)
* [http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx](http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx)
* [http://www.sos.state.oh.us/sos/elections/Voters/voterswithdisabilities.aspx](http://www.sos.state.oh.us/sos/elections/Voters/voterswithdisabilities.aspx)
* [http://www.sos.state.oh.us/sos/elections/Voters/register.aspx](http://www.sos.state.oh.us/sos/elections/Voters/register.aspx)
* [http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx](http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx)
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- http://www.sos.state.oh.us/SOS/
- http://voterlookup.sos.state.oh.us/voterlookup.aspx
Identified Issue

This page has markup errors, causing screen readers to miss content.

Markup errors like missing end tags mean screen readers may skip important content.

Violation Guideline: WCAG 2.0 A F70

URLs to be resolved:
- https://usoav.sos.state.oh.us/UOCAVA_vr_Login.aspx
- https://ovr.sos.state.oh.us/ovr/ModifyAddress.aspx
- https://ovr.sos.state.oh.us/ovr/Modify.aspx
- http://www.sos.state.oh.us/SOS/publications/Elections/order_VIG.aspx
- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/SOS/OVP.aspx
- http://www.sos.state.oh.us/sos/Legislation/BallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingsiseasy.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQID.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/
- http://voterlookup.sos.state.oh.us/voterlookup.aspx
Identified Issue

Provide a way to skip repetitive navigation links.

Without a skip link, screen readers read out the navigation links on every page before reading the page content. Headings can be a substitute in limited circumstances, but they’re not used by all screen reader users, and many other assistive technology users have no way to navigate via headings. Add a "Skip to Content" link at the start of the document hidden off-screen by CSS, and made visible on focus, so it’s available to keyboard and screen reader users:<a class="accessible" href="#main">[Skip to Content]</a>

Violation Guideline: Section 508.1194.22 (o)

URLs to be resolved:

- https://olvr.sos.state.oh.us/ovru/ModifyAddress.aspx
- https://olvr.sos.state.oh.us/ovru/Modify.aspx
- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/sos/bmv/MRV/QandA.aspx
- http://www.sos.state.oh.us/sos/LeqnAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/
- http://voterlookup.sos.state.oh.us/voterlookup.aspx
Identified Issue

Heading elements (h1..h6) should be used for structuring information on the page.

Incorrect use of heading elements is detrimental to site performance based not only on UX principles but also for SEO rankings and making it easy for viewers to follow the structure of the site. Using multiple h1 tags on a page confuses the structure of the layout as the tag is created to have a hierarchy allowing them to have pre-defined context. A screen reader should easily be able to understand that an h1 tag is more important than an h5.

Violation guideline: WCAG 2.0 A F43

URLs to be resolved:
Identified Issue

The font and center elements must not be used for text styling, instead structural markup should be used with CSS for styling.

Avoiding inline style will allow content to be dynamically styled from a single CSS document rather than requiring each page to be edited individually.

1. If the text content is used for section headers the styling elements should be changed to header elements (h1-h6).
2. If the text content is used to style an entire paragraph or other block level element use the CSS color, background-color, font-family and font-size and font-style properties to style the block level element.
   Ideally you should CSS rules instead of FONT elements. If you must use FONT elements use relative sizes like SIZE="+1" or SIZE="-1" instead of absolute sizes like SIZE="1". Text must be resizable to allow low-vision users to use a larger default font size.
3. If the text content is part of a sentence, phrase or word then replace the styling elements with the em, strong or span elements and use the CSS color, background-color, font-family and font-size and font-style properties to style the inline element.
4. If the bolded content is used for section headers, the styling elements should be changed to header elements (h1-h6).
5. If the bolded content is part of a sentence, phrase or word then replace the b element with the strong element.

URLs to be resolved:

- [http://www.sos.state.oh.us/sos/elections/Voters/voterswithdisabilities.aspx](http://www.sos.state.oh.us/sos/elections/Voters/voterswithdisabilities.aspx)
- [http://voterlookup.sos.state.oh.us/voterlookup.aspx](http://voterlookup.sos.state.oh.us/voterlookup.aspx)
Identified Issue

Each img element should have alt text.

Screen readers need alternative text in order to provide descriptions of visual elements of the page for non-sighted users. When images or figures are placed on a website without a populated alternative tag, they essentially do not exist for screen readers. Adding alt tags to all visual data elements of the page is required. Purely decorative elements do not need alternative tags.

Violation guideline: WCAG 2.0 A F65

URLs to be resolved:

- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/sos/bmw/MRV/QandA.aspx
- http://www.sos.state.oh.us/sos/LegAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/
Identified Issue

Each A tag must contain text or an IMG with an ALT attribute.

Add text to the link, or ALT text if the link contains an image. If there is no link text or the ALT tag is blank, screen readers have nothing to read, so read out the URL instead. Link A elements labelled with a TITLE attribute, and only containing an image don’t work in WindowEyes 8.4 with IE11 (the link HREF is read instead) and VoiceOver on OSX 10.9 (the image filename is read instead).

Violation guideline: WCAG 2.0 A F89

URLs to be resolved:

- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/sos/omv/MRV/QandA.aspx
- http://www.sos.state.oh.us/sos/LeqnAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/
Identified Issue

Two or more levels of nesting.

The HTML table structure was intended to be used for displaying tabular data. Web standards have moved away from using the table structure for layout purposes (visual representations) and towards using a more modular CSS layout for all aspects of visual design.

Rebuilding all of the table based sections of this site will allow screen readers to correctly read them and will also allow for pages to fit into a responsive framework in the future.

* This is a design issue which may cause the screen reader to wrongly behave. The better solution would be to rebuild the page.

URLs to be resolved:
Identified Issue

Use the LANG attribute to identify the language of the page.

In order to ensure that visitors are accessing the correct content and are able to understand the language of their screen reader, each document needs to have a language attribute set in the header. This can be a simple fix by batch replacing the header in some cases, but with the current site architecture this fix will take substantial time.

Violation guideline: WCAG 2.0 A 3.1.1

URLs to be resolved:

- http://voterlookup.sos.state.oh.us/voterlookup.aspx
- http://www.sos.state.oh.us/SOS/
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/votingiseasy.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/sos/LegAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/omv/MRV.aspx
- http://www.sos.state.oh.us/sos/omv/MRV/GrandA.aspx
- http://www.sos.state.oh.us/SOS/OVP.aspx
- http://www.sos.state.oh.us/SOS/publications.aspx#Elections
- http://www.sos.state.oh.us/SOS/publications/Elections/order_VIG.aspx
- https://olvr.sos.state.oh.us/ovru/Modify.aspx
- https://olvr.sos.state.oh.us/ovru/ModifyAddress.aspx
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- https://usoav.sos.state.oh.us/UCAVA_vr_Login.aspx
Identified Issue

This page has duplicate IDs which cause problems in screen readers.

Two or more elements on this page share the same ID, which cause problems in screen readers which use IDs for labeling controls and table headings. This also causes problems in JavaScript methods like `getElementById` and `querySelector`, which behave inconsistently when duplicate IDs are present. Change the ID so it is unique for each element.

Violation guideline: WCAG 2.0 A F77

* ID attribute is critical in HTML. It can be used in HTML, CSS and JavaScript. Fix this issue by changing existing ID may cause more issues.

URLs to be resolved:

- http://voterlookup.sos.state.oh.us/voterlookup.aspx
- http://www.sos.state.oh.us/sos/elections/Voters/FAQ.aspx
- http://www.sos.state.oh.us/SOS/elections/Voters/whatsontheballot.aspx
- http://www.sos.state.oh.us/sos/legAndBallotIssues/BallotBoard.aspx
- http://www.sos.state.oh.us/SOS/omv/MRV.aspx
- http://www.sos.state.oh.us/sos/omv/MRV/QandA.aspx
Identified Issue:

**AREA tags must have an ALT attribute.**

Non Sighted users can't see pictures, so each AREA should have an ALT attribute describing the function of the link, which is read aloud by screen readers.

Violation guideline: WCAG 2.0 A F65

**URLs to be resolved:**

Identified Issue

All FIELDSET tags should be labeled with LEGEND tags.

The first element inside the FIELDSET must be a LEGEND element, which provides a label or description for the group.

Violation guideline: WCAG 2.0 A H71

URLs to be resolved:

- https://olvr.sos.state.oh.us/ovru/ModifyAddress.aspx
PDFs

After scanning all of the documents provided we discovered the following errors. Each error listed below links to information on how they are violating the accessibility guidelines, our suggestions on how to fix the errors as well as which PDF documents are in violation.

1. **PDF Files do not have named form elements**
   a. See the related WCAG sections: 1.3.1 Info and Relationships, (Level A), 4.1.2 Name, role, value.

2. **Document Lacks Language Attribute**
   a. See the related WCAG section: 3.1.1 Language of Page (Level A)

3. **Document Lacks Title attribute**
   a. See the related WCAG section: 2.4 Page Titled (Level A)

4. **Reading Order Issues**
   a. See the related WCAG section: 1.3.1 Info and Relationships, 1.3.2, 2.4.1, 2.4.4, 2.4.5, 2.4.6, 3.1.2, 3.3.2, 4.1.2 Name, role, value

5. **Document is in multiple Languages**
   a. See the related WCAG section: 3.1.1 Language of Page (Level A)

6. **PDF is not tagged**
   a. See the related WCAG section: 1.3.1 Info and Relationships, 1.3.2, 2.4.1, 2.4.4, 2.4.5, 2.4.6, 3.1.2, 3.3.2, 4.1.2 Name, role, value

7. **Nested elements are used incorrectly**
   a. See the related WCAG section: #1.1.1 Non-text Content. (A)

8. **Alternative Text Issues**
   a. See the related WCAG section: 1.1.1 Non-text Content. (A)

9. **List Item Nesting**
   a. See the related WCAG section: 1.3.1 Info and Relationships. (Level A)

10. **Table Formatting Issues**
    a. Related WCAG section: 1.3.1 Info and Relationships. (Level A)
11. Character Encoding
   a. The WCAG doesn't address Unicode character mapping. However this is a major usability issue.

12. File Created for Print
   a. These files can still pass WCAG standards, but are part of a larger UX issue.
Identified Issue

PDF files do not have named form elements

ADA standards require that form elements have descriptions and names for screen reader use.

Looking through the provided PDF files some of them have form elements added and are flagged as “fillable” online on the Ohio SOS website. These forms are slightly more accessible than the documents without any field information, but they still fail the ADA compliance for use with screen readers. This can be fixed by re-working these forms and including descriptions and titles for each of the fields.

The correct solution for these is to hide the form labels from screen readers and instead have them read out the title and description of each form field. This will allow users to tab through a fieldset and easily complete the forms without struggling to understand what element of the page they are focused on.

See the related WCAG sections: 1.3.1 Info and Relationships. (Level A), 4.1.2 Name, role, value.

PDFs requiring this fix:

- [http://www.sos.state.oh.us/sos/upload/elections/forms/4010.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/4010.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/4010_Bilingual.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/4010_Bilingual.pdf)
- [http://www.sos.state.oh.us/sos/upload/sites/MRV/fpca.pdf](http://www.sos.state.oh.us/sos/upload/sites/MRV/fpca.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-A_Spanish.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-A_Spanish.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-J.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-J.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-M.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-M.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/11-B.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/11-B.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/11-F.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/11-F.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/11-S.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/11-S.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/12-M.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/12-M.pdf)
Identified Issue

Document lacks a Language Attribute

ADA standards require that each document has an explicitly declared single language value.

In order to ensure that visitors are accessing the correct content and are able to understand the language of their screen reader, each document needs to have a language attribute set in the header. A lot of the documents we scanned are available as bilingual documents, which makes sense from a printed, paper form, but having a bilingual document online poses some issues for screen readers and violates ADA compliance. The biggest issue with these documents is also lacking a correct reading order, this causes the screen readers to read one line in English and then one line in Spanish, which is difficult for the user to understand and becomes almost impossible to follow when input fields are used.

The best solution for these documents is to split them into single language documents with the language attribute set in the headers.

See the related WCAG section: Language of Page 3.1.1 (Level A)

PDFs requiring this fix:
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-S.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-V.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
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- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-B.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-F.pdf
Identified Issue

Document lacks file Title Attribute

Adding the title to a PDF file allows a more useful description of the contents within.

PDF documents often default to using the filename as the title, which works fine in some situations, but from an accessibility standpoint leaves something to be desired. Manually setting the title of the document to, for example, the name of the form provides extra useful information.

This is a simple solution that can be done through the File > Properties menu within Acrobat. From there you can add the Title and then go to the Initial View tab and select Show: Document Title.

See the related WCAG section: 2.4 Page Titled (Level A)

PDFs requiring this fix:

- http://www.sos.state.oh.us/sos/upload/elections/forms/10-B.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-D.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-F.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-J.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-L.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-M.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf

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November 16, 2015
Ohio Secretary of State
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- http://www.sos.state.oh.us/sos/upload/elections/forms/10-S.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-V.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Z.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/11-B.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/11-F.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/11-S.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-F.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-I.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-J.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-K.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-M.pdf
Identified Issue

Reading Order Issues

Documents must be setup so screen readers are able to scan in logical order.

The reading order of a PDF document is one of the most important settings from an ADA / Screen Reader first view. This essentially is telling the reader how the document is laid out and what order to read the items on the screen. It's especially important to take into account items that have been pulled out of the standard visual order (block quotes, images, figures, tables etc.) and ensure that they are read correctly.

The easiest way to ensure this is up to ADA standards is to manually set the reading order when the PDF is being created. When documents are automatically generated from other word processing programs (Such as Microsoft Word) they are often not set up in the correct order.

See the related WCAG section: 1.3.1 Info and Relationships, 1.3.2, 2.4.1, 2.4.4, 2.4.5, 2.4.6, 3.1.2, 3.3.2, 4.1.2 Name, role, value

PDFs requiring this fix:

- http://www.sos.state.oh.us/sos/upload/elections/forms/10-M.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-S.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-V.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
Ohio Secretary of State
ADA Compliance Results and Findings

- http://www.sos.state.oh.us/sos/upload/elections/forms/12-B.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-F.pdf
Identified Issue

Document is in multiple Languages

Bilingual is great for print, but not for digital release

As covered in the previous Language attribute, having digital files with multiple languages does more harm than good. The ideal solution would be to create 3 files for each of these documents:

- English for Digital Release
- Spanish for Digital Release
- Bilingual for printing

Splitting these files up will make it far easier for users to access the information they are looking for without having to skip through a document in the incorrect language.

PDFs requiring this fix:

Identified Issue

PDF is not tagged

Tagging the PDF is required for a logical reading order

In addition to the logical reading order issues addressed earlier, some PDFs were discovered to lack any document tagging at all. This would make the screen readers entirely unable to read them and thus render them completely inaccessible.

Adobe provides a setting within its Acrobat program that will read and generate tags automatically. Once the document has been automatically tagged, it should be manually checked and adjusted using the Touch Up Reading Order tool.

See the related WCAG section: 1.3.1 Info and Relationships, 1.3.2, 2.4.1, 2.4.4, 2.4.5, 2.4.6, 3.1.2, 3.3.2, 4.1.2 Name, role, value

PDFs requiring this fix:

- http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
Identified Issue

**Nested elements are used incorrectly**

All elements must be nested within the correct hierarchy

When creating PDF documents, each of the elements must be nested properly. This mainly applies to header tags being used by screen readers to give emphasis to subject changes or topic subheadings. This isn’t technically a required item for compliance but is a very easy fix and a best practice moving forward.

Fixing incorrectly nested headings can be done through the tags panel within Acrobat. This will allow you to either change or remove the header tags and re-order them correctly.

**See the related WCAG section: #1.1.1 Non-text Content. (A)**

**PDFs requiring this fix:**

- http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-F.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/11-B.pdf
Identified Issue

Alternative Text Issues

Descriptions of all visual elements of the page are required.

Much like web pages, PDF documents also require alternative tags providing a text based, screen reader friendly, description of the visual contents of a page. All images, figures or any other visual element requires an alternative tag. It is important to take into account the reading order when adding in alternative tags to certain elements, as well as making sure they are correctly associated with relevant content. Decorative elements do not require a text description.

Remediating alternative tags requires manually investigating the reading order and hierarchy of the elements of each page. Incorrectly nested elements will not be read by the screen reader so it is important to check nesting while adding alternative text.

See the related WCAG section: #1.1.1 Non-text Content. (A)

PDFs requiring this fix:

- http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-M.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/11-S.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-B.pdf
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ADA Compliance Results and Findings

- http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf
- http://www.sos.state.oh.us/sos/upload/elections/forms/12-F.pdf
Identified Issue

List Item Nesting

All items contained within lists must follow the correct format.

Building out lists in PDF files requires adherence to a strict structure. All lists must be laid out as follow:

- List Elements must contain:
  - List Item Elements
  - List Item Elements must only contain:
    - Label Elements
    - List Item Body Elements.

Most of the scanned documents are not using list elements in the way they are intended to be used and are causing violations that could be avoided entirely. Using list elements as a visual layout element is not accessible. Lists should be used sparingly and only in situations where an actual list of content needs to be displayed.

*See the related WCAG section: 1.3.1 Info and Relationships. (Level A)*

**PDFs requiring this fix:**

- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-U.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-U.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf)
- [http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf](http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf)

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November 16, 2015

Exh. A, p | 41
Identified Issue

Table Nesting / Headers
Correct structure and usage for tables is required.

Tables are one of the most complicated structures that can be used within a PDF document and must adhere to the following rules:

- Used for Tabular data only
  - Using tables as a layout method of breaking up images was a standard practice years ago for web design and has been carried over to PDF documents, this is not compliant and should always be avoided.

- Correct Hierarchy
  - Since tables present complex data they must be organized in a consistent manner each table must contain:
    - Header (TH)
      - This is required for all table elements
    - Rows (TR)
      - Rows are required to be children of Table, THead, TBody or TFoot elements.
    - Table Data (TD)
      - TD elements are children of TR elements.

- Regularity
  - Tables must contain the same number of columns in each row and maintain a consistent structure.

It is best to manually check the structure of every table element used. Most of the PDF documents scanned contain tables used incorrectly that could be removed entirely and replaced with semantically correct elements. Tables should only be used to present actual tabular data.

Related WCAG section: 1.3.1 Info and Relationships. (Level A)

PDFs requiring this fix:
http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/10-N.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/10-R.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/10-U.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/10-W.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/10-X.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/10-Y.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf
http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf
Character Encoding

Proper encoding is required for readable documents

While character encoding isn't an actual ADA or 508 requirement, documents with encoding errors can be considered non-compliant. Character encoding errors are generally caused by some type of corruption in the PDF creation. These documents generally need to be rebuilt.

PDFs requiring this fix:
- http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf
Identified Issue

File is created for Printing, rather than digital distribution.

While not technically an ADA compliance issue, this isn't best practice from a UX point of view.

When scanning the PDF documents we noticed that a few of the files have been created for specific print applications. These files should be rebuilt into digital only distribution PDFs. Having users downloading files with print bleed and cut marks adds confusion.

PDFs requiring this fix:

- [Link](http://www.sos.state.oh.us/sos/upload/publications/election/GuidetoVoting2016.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/publications/election/MRV.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/publications/election/ada/VoterAccessGuide.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/publications/election/bilingual/VRInstructions.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/elections/forms/10-C.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/elections/forms/12-C.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/elections/forms/12-D.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/elections/forms/12-F.pdf)
- [Link](http://www.sos.state.oh.us/sos/upload/elections/forms/12-J.pdf)
Videos

The provided videos were manually scanned and accessed through multiple browsers in order to determine faults pertaining to ADA compliance. Videos were compared to the Section 508 Multimedia File Checklist in order to determine compliance.

The checklist is available at:


1. Video files do not contain easily legible, synchronized captions
2. Video contains animated text
3. Link to file is broken or does not function properly
4. Videos do not contain closed captions
5. Videos do not contain controls to turn closed captions on & off
6. Videos do not contain controls accessible by keyboard alone
7. Videos are not easily navigable in or out by keyboard alone
Identified Issue

Video files do not contain easily legible, synchronized captions.

ADA standards require that the document utilizes recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri.)

The following videos do have synchronized captions, but due to their condensed size, the embedded captions are distorted and not clearly legible.

Recommended solutions for these would be to layer captions over the video, reformat the videos, or to host videos on a third party site such as YouTube.

Videos requiring this fix:

- **Optical Scan: Hart eScan - Instructional “How to Vote” video - QuickTime low resolution**
  - Page containing link:  

- **Optical Scan: Hart eScan - Instructional “How to Vote” video - Windows Media low resolution**
  - Page Containing Link:  

- **ADA: Hart eState - Instructional “How to Vote” video - QuickTime low resolution**
  - Page containing link:  

- **ADA: Hart eState - Instructional “How to Vote” video - Windows Media low resolution**
  - Page containing link:  
Identified Issue

Video contains animated text.

ADA standards require that the documents refrain from using flashing/flickering text and/or animated text.

In order to ensure that visitors are able to easily read on screen text, it needs to be static and not changing while present.

Recommended solutions for these would be to layer captions over the video, reformat the videos, or to host videos on a third party site such as YouTube.

Videos requiring this fix:

- Direct Recording Electronic & ADA: ES&S iVotronic - Instructional "How to Vote" video

- Optical Scan: ES&S Model 100 - Instructional "How to Vote" video

- ADA: ES&S AutoMark - Instructional "How to Vote" video

- Optical Scan: ES&S DS-200 - Instructional "How to Vote" video

- ADA: ES&S AutoMark - Instructional "How to Vote" video
Identified Issue

Link to file is broken or does not function properly.

ADA standards require that the documents:

- All URLs contain the correct hyperlink and display the fully qualified URL.
- All URLs are linked to correct Web destinations.

In these videos and/or transcripts, the hyperlinks are non-functioning or redirect to the incorrect location.

Recommended solutions for these would be to standardize video and transcript locations and ensuring that all hyperlinks are properly working.

Videos requiring this fix:

- Direct Recording Electronic & ADA: ES&S iVotronic - Instructional "How to Vote" video (High Res QuickTime link directs to Low Res QuickTime Video)
- Optical Scan: ES&S DS-200 - Instructional "How to Vote" video (hyperlink to transcript is not active / is inoperable)
- Dominion Image Cast Evolution (video is extremely large [50MB] and does not play without manually downloading and launching in an external application.
Identified Issue

Videos do not contain closed captions.

ADA standards require that if multimedia is a video— the video or animation contains synchronized captioning

In the listed videos, no associated captions were located or accessible.

Recommended solutions for these would be to layer captions over the video, reformat the videos, or to host videos on a third party site such as YouTube.

Videos requiring this fix:

- Direct Recording Electronic & ADA: Premier AccuVote-TSx - Instructional "How to Vote" video
- Direct Recording Electronic & ADA: ES&S IVotronic - Instructional "How to Vote" video
- Optical Scan: ES&S Model 100 - Instructional "How to Vote" video
- ADA: ES&S AutoMark - Instructional "How to Vote" video
- Optical Scan: ES&S DS-200 - Instructional "How to Vote" video
- ADA: ES&S AutoMark - Instructional "How to Vote" video
- Optical Scan: Premier AccuVote - Instructional "How to Vote" video
- ADA: Premier AccuVote-TSx - Instructional "How to Vote" video
Identified Issue

Videos do not contain controls to turn closed captions on & off.

ADA standards require that videos contain controls to turn synchronized captioning on and off.

In the listed videos, only five videos had captions and there are no captioning controls for any of the videos. Users who require reading vs. audio content will be unable to use this content.

Recommended solutions for these would be to layer captions over the video with controls, reformat the videos, or to host videos on a third party site such as YouTube.

Videos requiring this fix:

- Direct Recording Electronic & ADA: Premier AccuVote-TSX -Instructional "How to Vote" video

- Direct Recording Electronic & ADA: ES&S iVotronic - Instructional "How to Vote" video (page: 6)

- Optical Scan: ES&S Model 100 - Instructional "How to Vote" video

- ADA: ES&S AutoMark - Instructional "How to Vote" video

- Optical Scan: ES&S DS-200 - Instructional "How to Vote" video

- ADA: ES&S AutoMark - Instructional "How to Vote" video

- Optical Scan: Hart eScan - Instructional "How to Vote" video
Ohio Secretary of State
ADA Compliance Results and Findings

- ADA: Hart eSlate Instructional "How to Vote" video
- Optical Scan: Premier AccuVote - Instructional "How to Vote" video
- ADA: Premier AccuVote-TSx - Instructional "How to Vote" video (page:
- Dominion Image Cast Evolution
- Voting On Election Day
- Registering to Vote in Ohio & Keeping Your Registration Updated
- Absentee Voting in Ohio
Identified Issue

Videos do not contain controls accessible by keyboard alone.

ADA standards require that videos all media controls are keyboard accessible

Of the provided videos, none of them were easily controllable using keyboard controls alone. The only consistent control available is pressing the spacebar to start and stop each video.

Recommended solutions for these would be to reformat the fields containing the videos and controls or to host videos through a third party site such as YouTube.

Videos requiring this fix:

- Direct Recording Electronic & ADA: Premier AccuVote-TSX -Instructional "How to Vote" video
- Direct Recording Electronic & ADA: ES&S iVotronic - Instructional "How to Vote" video
- Optical Scan: ES&S Model 100 - Instructional "How to Vote" video
- ADA: ES&S AutoMark - Instructional "How to Vote" video
- Optical Scan: ES&S DS-200 - Instructional "How to Vote" video
- ADA: ES&S AutoMark - Instructional "How to Vote" video
- Optical Scan: Hart eScan - Instructional "How to Vote" video
- ADA: Hart eSlate Instructional "How to Vote" video
- Optical Scan: Premier AccuVote - Instructional "How to Vote" video
- ADA: Premier AccuVote-TSx - Instructional "How to Vote" video
Ohio Secretary of State
ADA Compliance Results and Findings

- Dominion Image Cast Evolution
- Voting On Election Day
- Registering to Vote in Ohio & Keeping Your Registration Updated
- Absentee Voting in Ohio
**Identified Issue**

Videos are not easily navigable in or out by keyboard alone.

ADA requires that the media is embedded in a way that allows the user to use keyboard controls to move in and out of the video in relation to surrounding content.

Of the provided videos, none of them are easily accessible using keyboard controls alone. All but three are accessible with the keyboard, but they open up within a new window, making it cumbersome for users to flow between the page and the video. The three that are contained within the page, are not accessible with keyboard controls alone.

Recommended solutions for these would be to reformat the fields containing the videos so that they are available to be accessed on the same page, without opening a new window or to host videos through a third party site such as YouTube.

**Videos requiring this fix:**
- Direct Recording Electronic & ADA: Premier AccuVote-TSX - Instructional "How to Vote" video
- Direct Recording Electronic & ADA: ES&S iVotronic - Instructional "How to Vote" video
- Optical Scan: ES&S Model 100 - Instructional "How to Vote" video
- ADA: ES&S AutoMark - Instructional "How to Vote" video
- Optical Scan: ES&S DS-200 - Instructional "How to Vote" video
- ADA: ES&S AutoMark - Instructional "How to Vote" video
- Optical Scan: Hart eScan - Instructional "How to Vote" video
- ADA: Hart eSlate Instructional "How to Vote" video
Ohio Secretary of State
ADA Compliance Results and Findings

- Optical Scan: Premier AccuVote - Instructional "How to Vote" video
- ADA: Premier AccuVote-TSx - Instructional "How to Vote" video
- Dominion Image Cast Evolution
- Voting On Election Day
- Registering to Vote in Ohio & Keeping Your Registration Updated
- Absentee Voting in Ohio
Web URL Inventory
http://sosclouds.cloctappy.net/
https://olvr.sos.state.oh.us/olvr/Modify.aspx
https://olvr.sos.state.oh.us/olvr/ModifyAddress.aspx
http://voterlookup.sos.state.oh.us/voterlookup.aspx
http://www.sos.state.oh.us/SOS/publications.aspx#Elections
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