

Accessibility RoadMap Appendix

This Accessibility RoadMap Appendix is the how-to information for the different accessibility components which accompanies the five section Accessibility RoadMap: Policies, Planning, Design, Training, and Community. Our goal is constant improvement that responds to the needs of the students, faculty expertise, and complies with our accessibility laws.

Table of Contents

<i>Nine Techniques to Creating Accessible PowerPoint Presentation</i>	2
Technique 1 – Design Technique	2
Technique 2 – Slide Theme	2
Technique 3 – Slide Layout	2
Technique 4 – Images, Charts, and Graphs	3
Technique 5 – Checking Visibility	4
Technique 6 – Table Tools Design Tab	4
Technique 7 – Links	4
Technique 8 – Checking the Reading Order	4
Technique 9 - Accessibility Checker	5
<i>Ten Techniques To Creating Accessible Word Document</i>	6
Technique 1 – Specify Document Language	6
Technique 2 – Provide Alternate Text for Images and Graphical Objects	6
Technique 3 – Avoid Floating” Elements	7
Technique 4 – Style Elements	8
Technique 5 – Use Headings	9
Technique 6 – Use Built-In Document Structuring Features	10
Technique 7 – Create Accessible Charts	13
Technique 8 – Make Content Easier to See	14
Technique 9 – Provide Context for links	14
Technique 10 – Check Accessibility	14
<i>Seventeen Techniques to Test PDF for Accessibility with Acrobat</i>	16
Document Properties	16
Structure Tags	18
Objects	20
Accessibility Checker	22

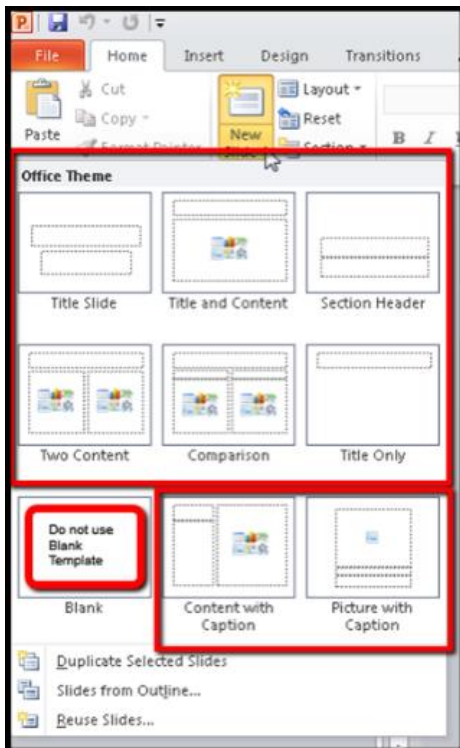
Nine Techniques to Creating Accessible PowerPoint Presentation

Technique 1 – Design Technique



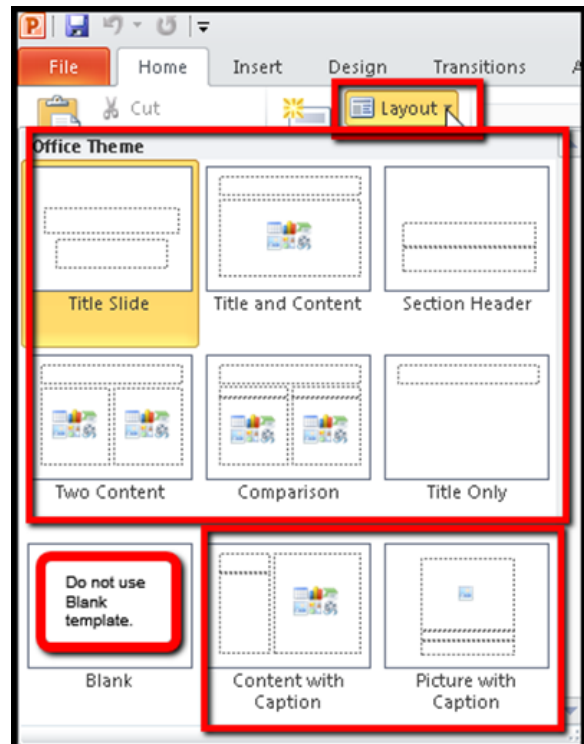
- When PowerPoint opens, select the “Design” tab (PC) “Change Slides” (Mac)
- Click the desired template for the PowerPoint Presentation
 - For example, select a template with:
 - Readable font style—Arial or Verdana
 - Readable font size—12 or larger
 - Contrast—For example, black text on white background
 - Color:
 - Do not use alone for emphasis
 - Limit use of color on slides

Technique 2 – Slide Theme



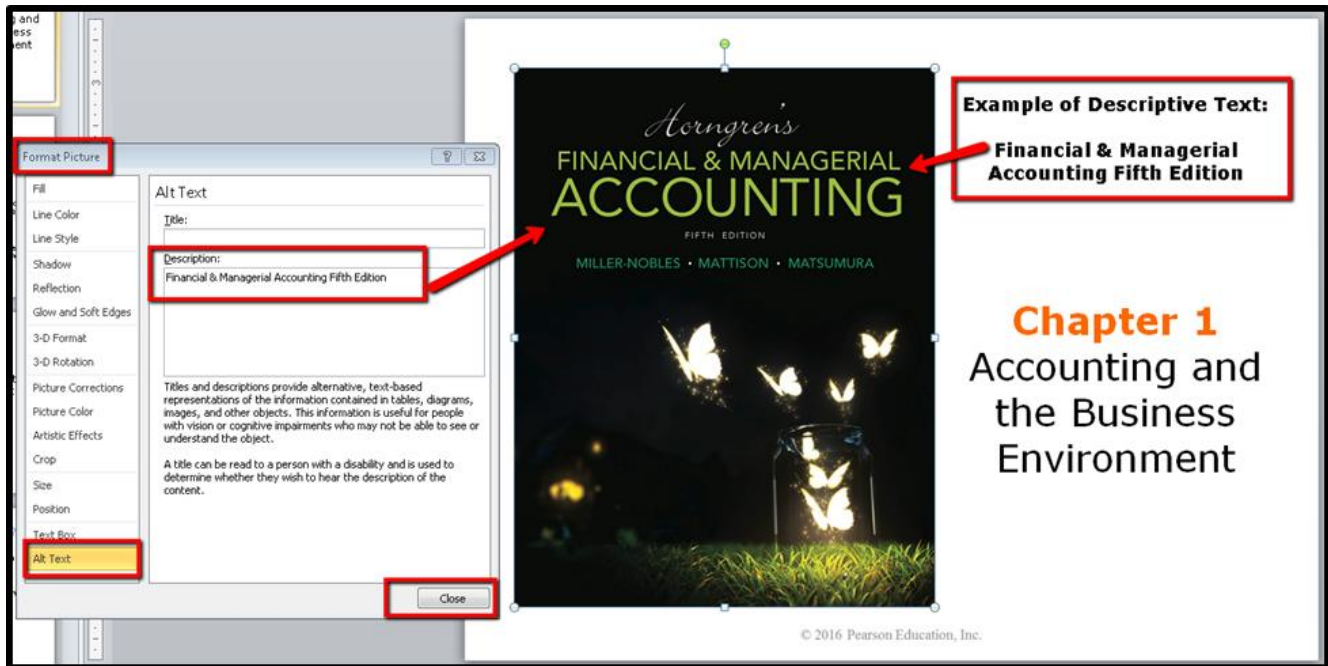
- Select New Slide to add slides to the presentation.
- Do NOT use the Blank template.
- Do NOT add text boxes to a slide. (They cannot be read by a screen reader).

Technique 3 – Slide Layout



- Select Layout to change the layout of a slide.
- Do NOT use the Blank template.
- Do NOT add text boxes to a slide. (They cannot be read by a screen reader).

Technique 4 – Images, Charts, and Graphs



Powerpoint presentations usually include images. While often overlooked, alternative text provides a textual alternative to non-text content in web pages. The alternative text serves several functions:

- It is read by screen readers to those with visual or certain cognitive disabilities.
- Displayed in place of image in browsers when image file is not uploaded or when user has chosen not to view images.
- Provides a semantic meaning and description to images which can be read by search engines or used later.

Alt Text – is a shortened term for alternative text. The alt text is used to specify text for an image.

- Right-click on image.
- Select Format Image.
- Select Alt Text.
- Enter Alt Text in the Description field.

Descriptive Text -

- Enter before or after chart, graph, or image.
- Enter in the Descriptive text.

Tips to describe images

- Present same content and function of the image.
- Typically, few words are necessary, though short sentence or two may be appropriate.
- Avoid providing the same information as text within the context of the image.
- Do not use the phrases "Image of..." or "Picture of..." to describe the image.

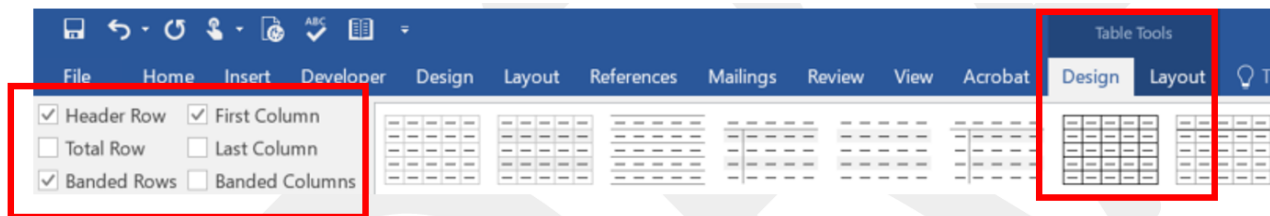
Technique 5 – Checking Visibility



To understand what a person sees when they are colorblind:

- Click the **View** tab.
- Then select **Grayscale**.

Technique 6 – Table Tools Design Tab

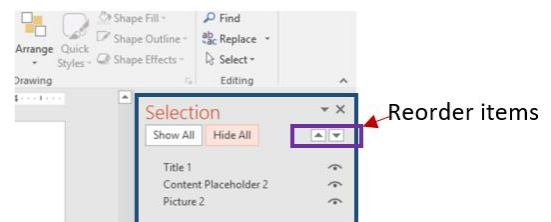


- Be sure there is enough contrast between the text and background colors of each cell.
- Choose a table style that provides grid lines to separate the data cells.
- Provide column headings, alt text for the table. This will help with navigation if someone is using a screen reader.
- Highlight first row and tick on Header Row.
- Highlight first column and tick on First Column.

Technique 7 – Links

Hyperlink text should provide a clear description of the link destination. Do not use the Uniform Resource Locator (URL) or words such as “Click Here...”.

Technique 8 – Checking the Reading Order



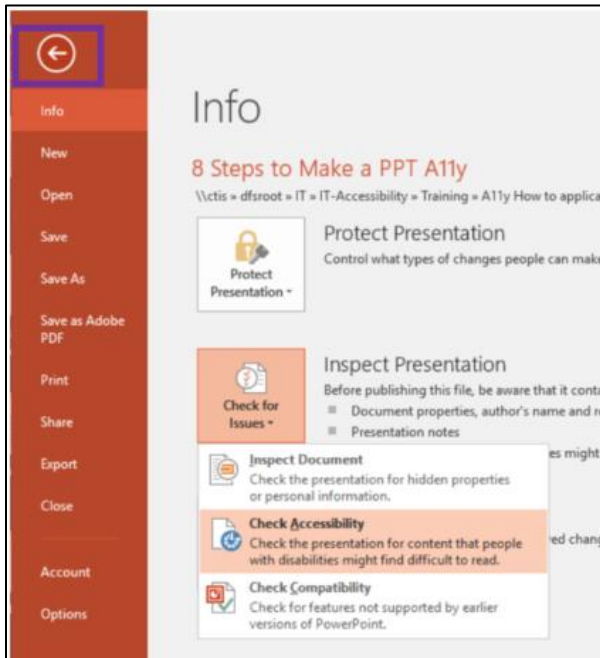
The Selection Pane will appear listing all of the objects on the slide.

- Select **Home** tab.
- Click on **Arrange**.
- Click on **Selection Pane**.
- **Selection Pane** will display order of content on the slide.

Tips for Reading Order

Be sure that the order in which the content of your slides is read makes sense. If you are using a built-in layout for your slides, you will likely no problem with this. However, if you add objects, images or other content that is not part of the slide layout, you may not know what order these objects will be read with a screen reader. After opening the selection pane, review the order of all objects on slide. If the order is not logical, select the shape that you want to move, and then use the arrows at the top or bottom the pane to re-order the items in logical sequence.

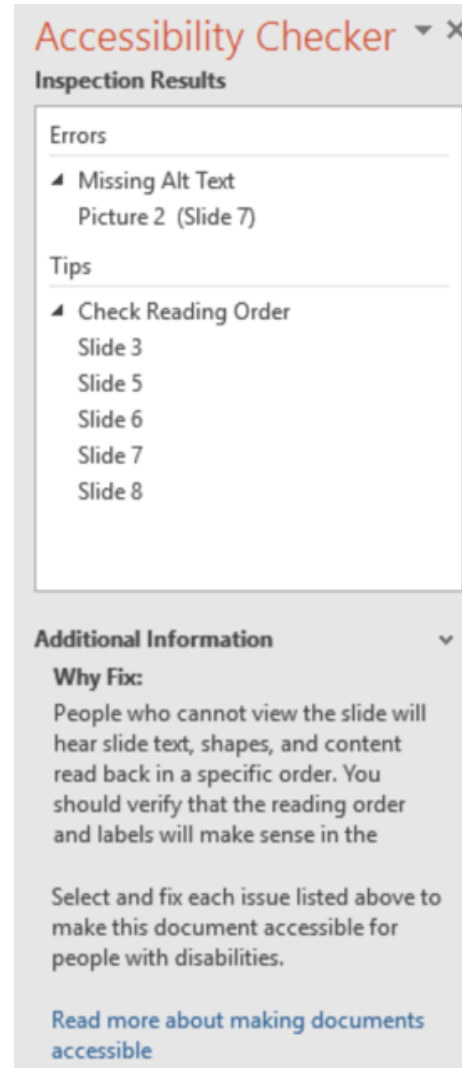
Technique 9 - Accessibility Checker



To run the accessibility checker:

- Click on the **File** tab, click on **Info** if currently not selected.
- Click on Check for Issues button.
- Then click on Check Accessibility.

Accessibility Checker Results



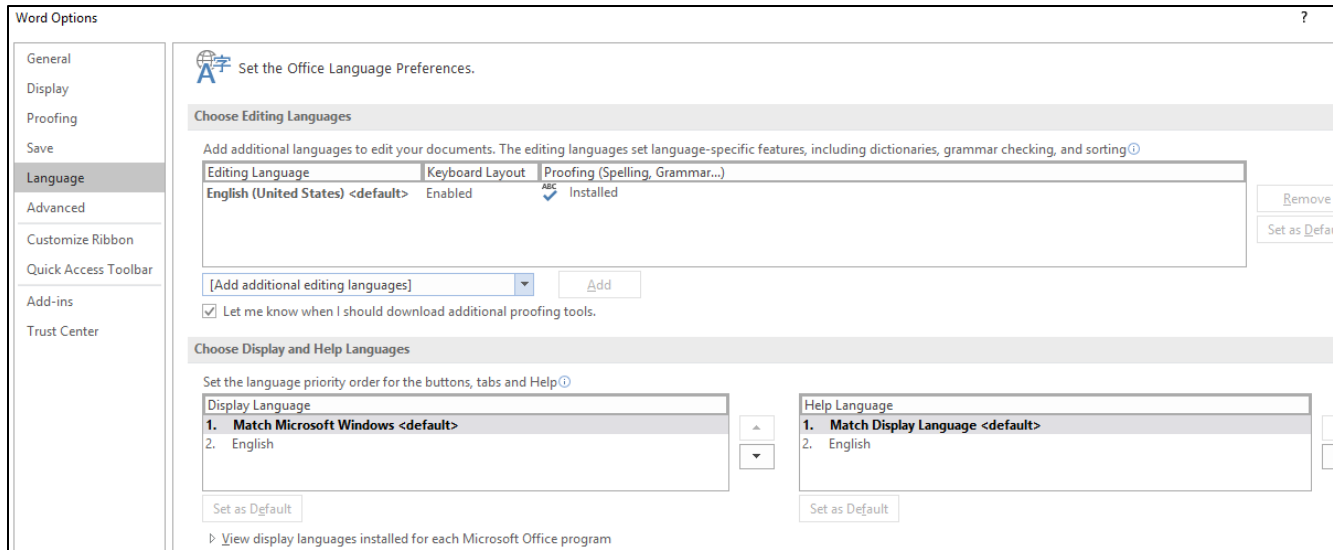
The checker presents accessibility errors, warnings, and tips. Feedback is provided, as well as tips on how to repair it, are included.

- Click on each item listed in the Inspection Results window.
- Review Additional Information on Why to Fix and How to Fix accessibility issues.

Ten Techniques To Creating Accessible Word Document

Technique 1 – Specify Document Language

For assistive technologies (e.g., screen readers) to present your document accurately, it is important to indicate the natural language of the document.



To view or change the default language

- Go to menu item: **File**
- Select **Options** from the list in the left of the **Options** dialog.
- Under **Editing Language**, select the editing language you want to use.

Note: to add an editing language, select the language from the drop down list labeled [add additional editing languages].

- Select **Set as Default**.

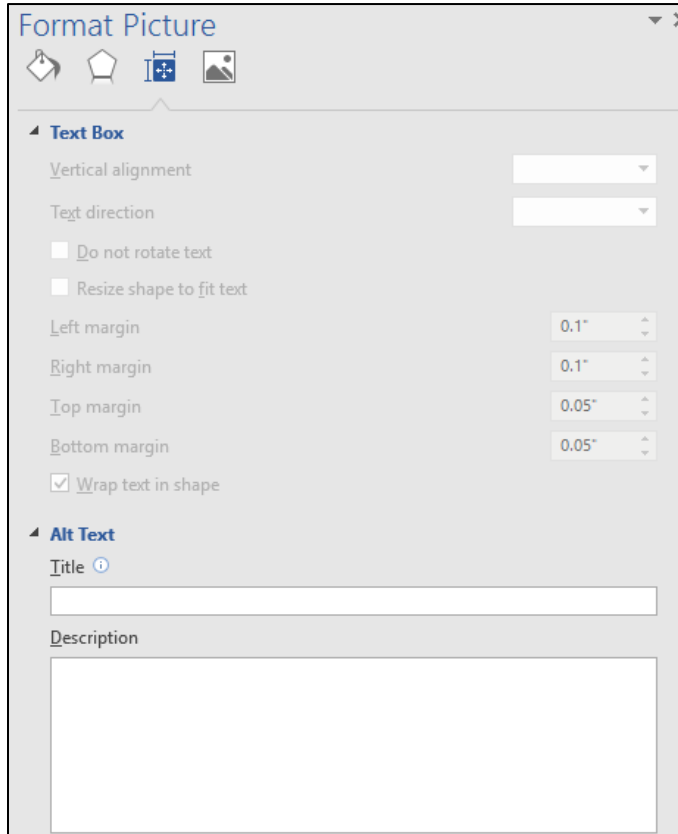
Technique 2 – Provide Alternate Text for Images and Graphical Objects

When using images or other graphical objects, such as charts and graphs, it is important to ensure that the information you intend to convey by the image is also conveyed to people who cannot see the image. This can be accomplished by adding concise alternative text to each image. If an image is too complicated to concisely describe in the alternative text alone (artwork, flowcharts, etc), provide a short text alternative and a longer description as well.

Tips for writing alternative text (Alt Text)

- Ask “what information is the image conveying?”
- Alt text should be short, usually a sentence or less.
- If more description is required (e.g., chart or graph), provide a short description in the alt text and more detail in the long description field.
- If using images on tests, remember screen readers will read the alt text verbatim.

Adding Alt text to images and graphical objects



- Right-click the object.
- Select Format Picture.
- Select the Alt Text option from the list.
- Fill in the Title (short description) and Description (short description and / or purpose of graphic).

Technique 3 – Avoid Floating” Elements

A “floating” object keeps its position relative to the page, while text flows around it. As content moves up or down on the page, the object stays where it was placed. To ensure that images and objects remain with the text that references it, always position it as an inline object.

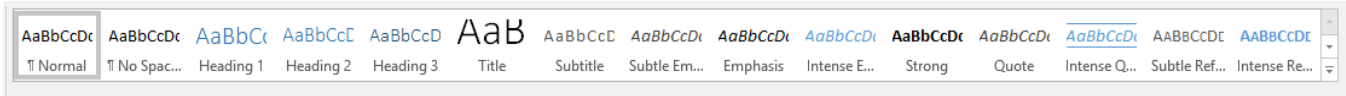
To prevent an image or object from “floating”

- Select the object.
- Go to menu item: Page Layout.
- Select Position from the Arrange section.
- Select In Line with Text.

Or

- Right-click on the object.
- Select In Line with Text icon.

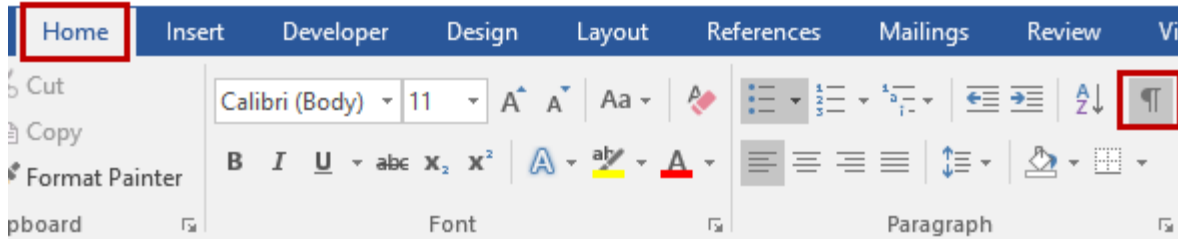
Technique 4 – Style Elements



Creating a uniform heading structure through use of styles allows screen readers to navigate a document.

Testing Methods

There are various methods for inspecting a document to determine whether styles have been used. This method can be used separately or together:



- Select Home Tab.
- In Paragraph area, select Show / Hide button ¶.
- TEST METHODS: If there are TAB → characters used to provide indentation; if there are multiple Paragraph 'Return' ¶ characters used to provide spacing between paragraphs; then the document is NOT properly formatted with styles.

Avoid using spaces for paragraph alignment

.....Designing.

.....This worksheet has three how-to information for differer expertise, and complies with ou

Avoid multiple 'return' characters used for spacing

Avoid 'TAB' characters for paragraph indentation

→ For each criterion, put a r

Technique 5 – Use Headings

Headings are used to divide documents up into meaningful chunks of information.

Tips for headings

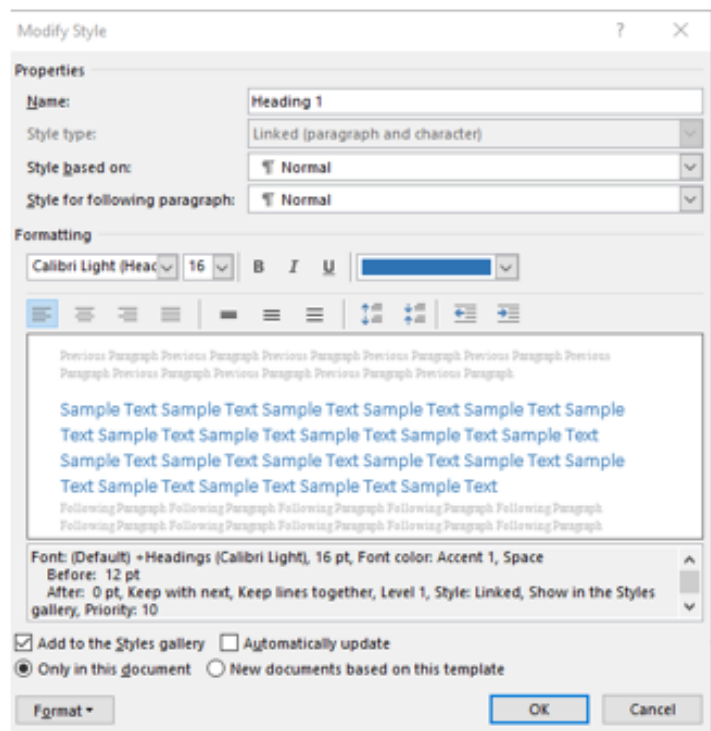
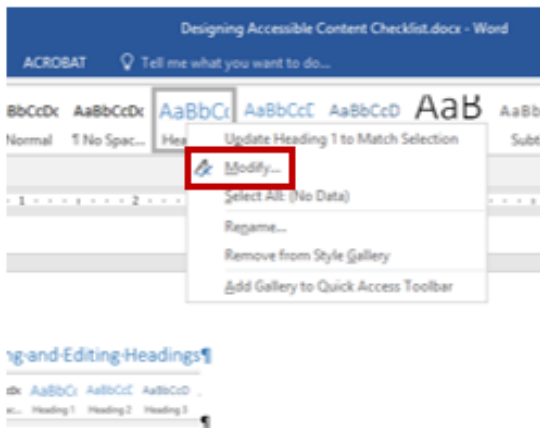
- Use the default headings styles provided style (e.g. “Heading 1”, Heading 2”, etc.) .
- Nest headings properly (e.g., the sub-headings of a “Heading 1” are “ Heading 2”, etc.).
- Do not skip heading levels.

To apply headings to selected text



- Select text.
- Right-click and select Styles.
- Select the heading style from the list.

To modify heading styles

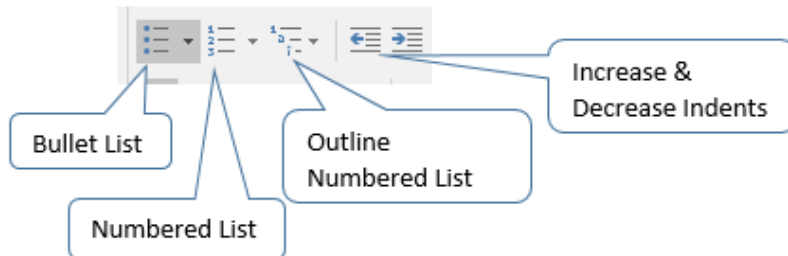


- Go to menu item: Home.
- In the Styles section, Right-click the style you wish to use form the Styles Gallery.
- Select Modify.
- In the Modify Style dialog, make the appropriate changes to style characteristics.
- Select OK.

Technique 6 – Use Built-In Document Structuring Features

6.1 List Formatting

When bulleted list and numbered list formatting is used, Screen Readers will properly announce the text as being part of a list, and provide a means for user to quickly navigate between items as well as move in and out of lists.



To create an ordered or unordered list

- Go to menu item: Home.
- In the Paragraph section, select list controls Bullet, Numbered, Outline Numbered, Increase and decrease indents.
- To choose a different list format, select the arrow beside the icon.
- Select a format from the format Library that appears in the drop-down menu.

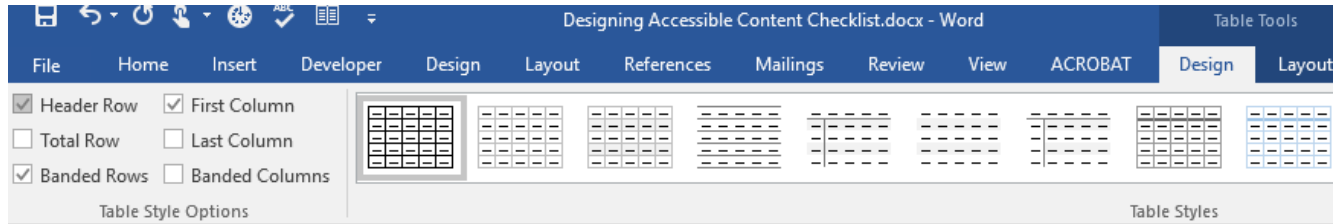
6.2 Tables

When using tables, it is important to ensure that they are clear and appropriately structured. This helps all users to better understand the information in the table and allows assistive technologies (e.g. screen readers) to convey context in a meaningful way.

Tips for tables

- Only use tables for tabular information, not for formatting.
- Use “real tables” rather than text formatted to look like tables using TAB key or space bar. These will not be recognized by assistive technology.
- Keep tables simple and divide complex data sets into separate smaller tables, where possible.
- Set the header to show at top of each page.
- Create a text summary of the essential table contents.
- Table captions or descriptions should answer the question “what is the table’s purpose and how is it organized?”
- Ensure the table is not “floating” on the page (see Technique 3)

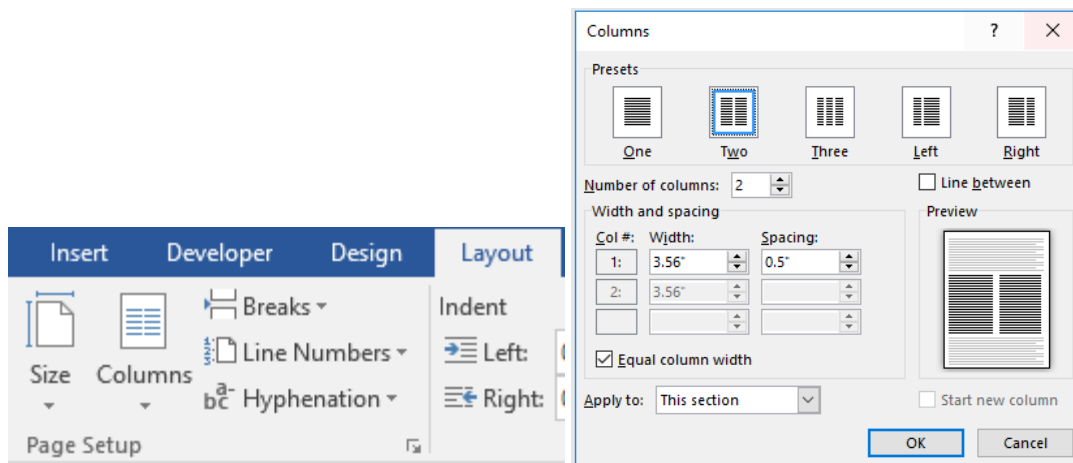
To add a table with headings



- Go to menu item: Insert.
- In the Tables section, select the Tables icon.
- Select the number of rows and columns.
- Select the table and Table Tools menu item should appear.
- Go to menu item: Table Tools > Design.
- In the Table Style Options section, select the Header Row check box.

6.3 Columns

Use **Columns** feature for placing text in columns. Screen readers will read in the correct order (i.e., first go down one column and then move to the top of the next column).



- Go to menu item: Layout.
- Open the Columns dialog box.
- Set the number of columns or select More columns, set spacing between columns and whether this formatting should apply to a section or the whole document.

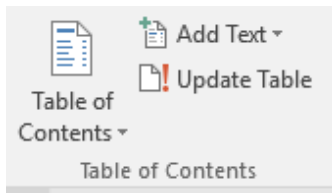
6.4 Page Breaks and Blank Hard Returns

- Start a new page by inserting a page break instead of repeated hard returns.
- Avoid blank hard returns for paragraphs.

6.5 Use a Table of Contents

Creating an index or table of contents to outline document content can provide navigating the content in meaningful sequence.

The best way to generate a table of contents is after applying the predefined heading styles, such as “Heading 1”.



To insert a Table of Content

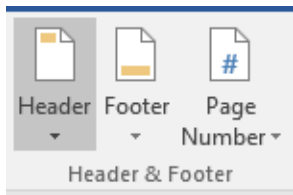
- Go to menu item: References.
- In the Table of Contents section, select Table of Contents.
- Select the style that you want to use.

To update a Table of Contents

- Select the table.
- Go to menu item: References.
- In the Table of Contents section, select the Update Table button.

6.6 Use Page Numbering

Numbering the pages of your document helps those reading and editing your document effectively navigate and reference its content. For users of assistive technologies, it provides a valuable point of reference within the document.



To Insert Page Numbers

- Go to menu item: Insert
- In the Header & Footer section, select Page Number
- Select where you would like to insert your page numbers
- Select the style of page number you would like to use

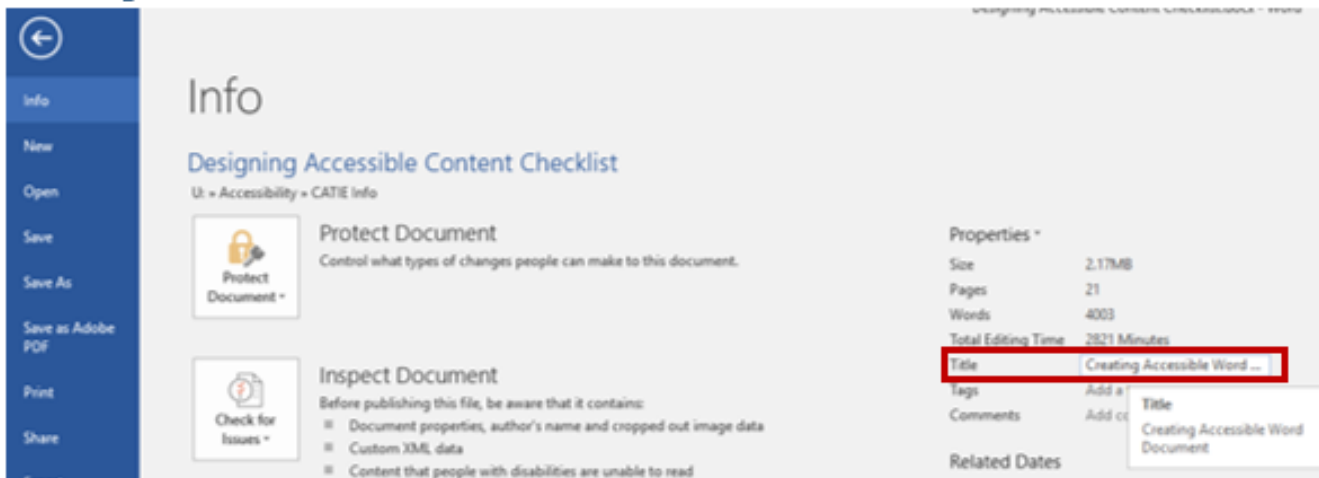
To Format Page Numbers

- Go to menu item: Insert.
- In the Header & Footer section, select Page Number.
- Select Format Page Numbers...
- In the Page Number Format dialog, select the page format characteristics you would like to use.
- Note: The changes do not create a new page format style.

6.7 Document Title

In case the document is ever converted into HTML, it should be given a descriptive and meaningful title.

To change the title of the current document

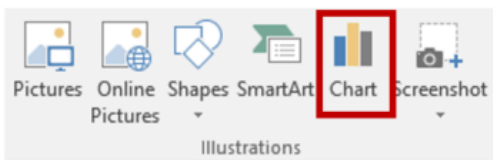


- Go to menu item: File.
- Select Info from the list in the left window pane.
- In the right window pane, select on the Title text box.
- Enter the Title.

Technique 7 – Create Accessible Charts

Charts can be used to make data more understandable. All basic accessibility considerations that are applied to the document must also be applied to charts and elements.

To create a chart



- Go to menu item: Insert.
- In the Illustrations section, select Chart.
- Select a Chart Type from the Chart Gallery.
- Select OK.
- Update the datasheet with the data you would like to include in your chart.
- Close the datasheet.

This will open the Excel document titled “Chart in Microsoft Word”, where you can input the data you would like to include in the chart. When done, simply close the Excel window and the data will appear on the chart.

To add titles and labels

- Click on the chart.
- Click on the Chart Elements to add, remove or change chart elements.

Technique 8 – Make Content Easier to See

Here are some things to keep in mind:

8.1 Format of Text

- Use font sizes between 12 and 18 points for body text.
- Use standard fonts with clear spacing and easily recognized upper and lower case characters. San serif fonts (e.g., Arial, Verdana) may sometimes be easier to read than serif fonts (e.g., Times New Roman, Garamond).
- Avoid large amounts of text set all in caps, italic or underlined.

8.2 Use Sufficient Contrast

Color contrast should have contrast ratio of at least 4.5:1. To help you determine the contrast, here are some free tools help you check color contrast.

- Paciello Color Contrast Analyzer <https://developer.paciellogroup.com/resources/contrastanalyser/>
- ColorZilla <http://www.colorzilla.com/firefox/>
- WebAIM <https://webaim.org/resources/contrastchecker/>

8.3 Avoid Using Color Alone

Color should not be used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.

Technique 9 – Provide Context for links

Links are more effective navigation aids when the user understands the likely result of following the link.

To add Links with meaningful text

- Type or paste in a web address and press spacebar.
- Select the link and Right-click.
- Select Edit Hyperlink.
- Edit the text in the Text to display box.

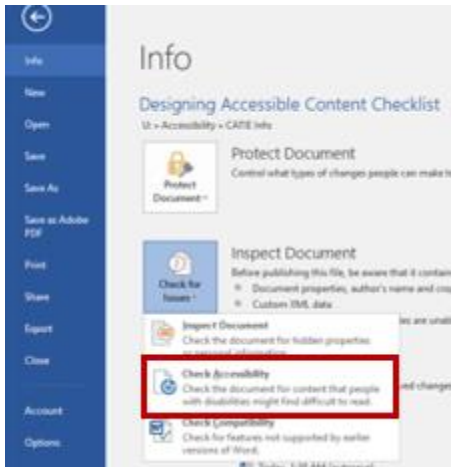
Technique 10 – Check Accessibility

The “Accessibility Checker” classifies issues as

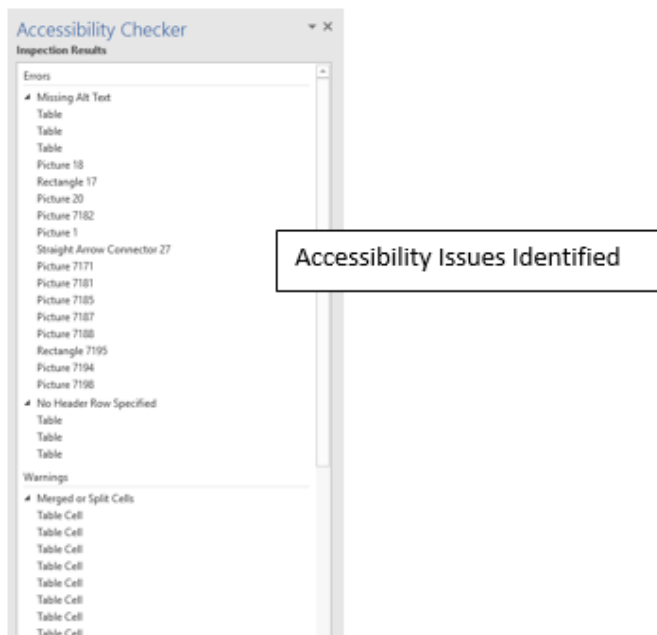
- **Error** – content that makes a file very difficult or impossible for people with disabilities to understand.
- **Warning** – content that in most cases makes a file difficult for people with disabilities to understand.
- **Tip** – content that people with disabilities can understand, but the content might be better organized or presented in a way that would maximize their experience.

To use the "Accessibility Checker"

- Go to menu item: File.
- Select Info in the left window pane.
- Click Check for Issues.
- Click on Check Accessibility, an alert will appear if a potential accessibility issue has been detected.

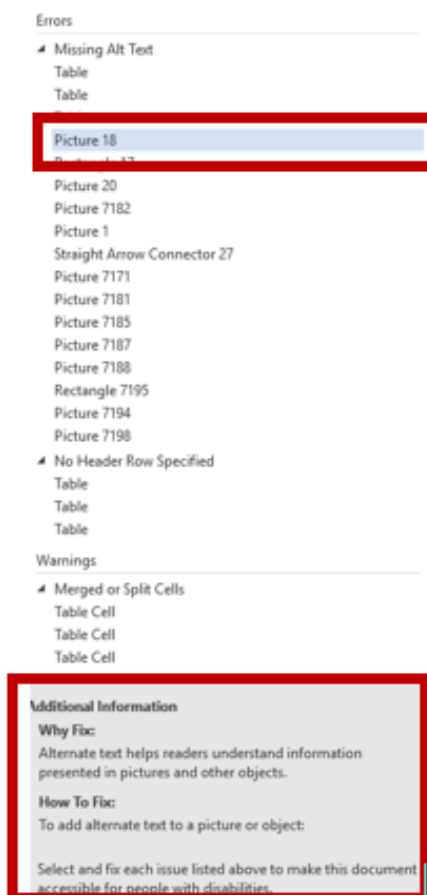


An Accessibility Checker task pane will open, showing the inspection results.



Select a specific issue to see **Additional Information**.

Follow the steps provided to fix the issue.



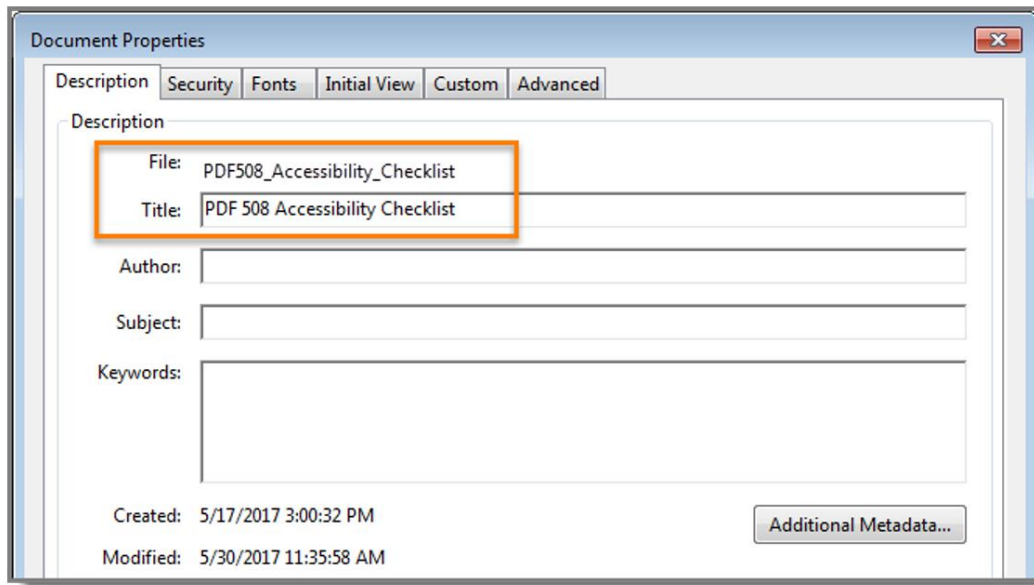
Seventeen Techniques to Test PDF for Accessibility with Acrobat

Courtesy of Section508.gov

Note, PDFs that show “Adobe LiveCycle Designer” under Application:” or “PDF Producer:” cannot be tested for accessibility with Acrobat Pro.

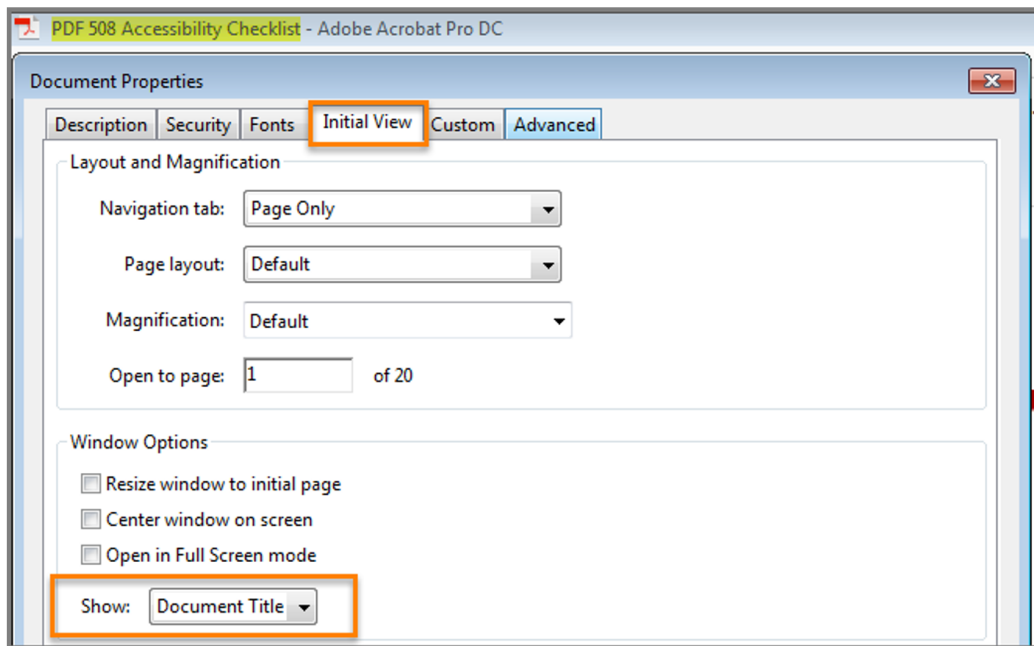
Document Properties

1. Open the “Document Properties > Description (File > Properties > Description)” tab.
 - Does the “File” identify the document or its purpose?



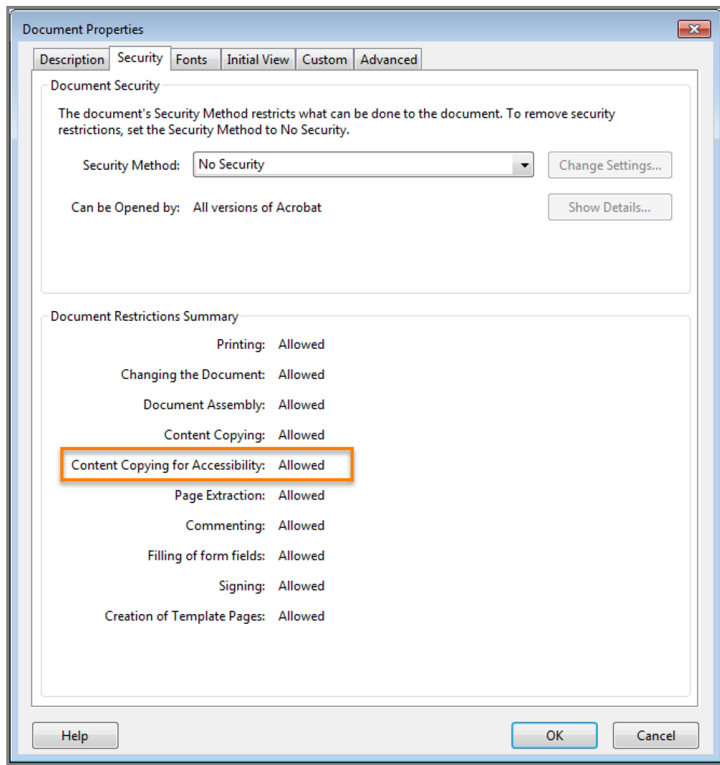
2. Is Document Title selected?

- Open “Document Properties > Initial View (File > Properties > Initial View)” tab, and set “Window Options > Show: Document Title”.



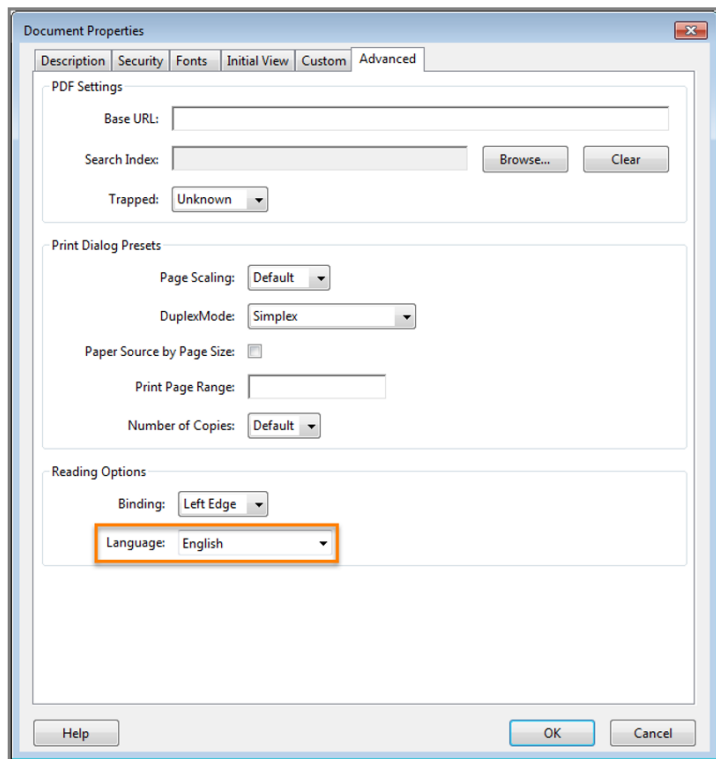
3. Is Assistive Technology access enabled? Does “Content Copying for Accessibility” display “Allowed?”

- Open “Document Properties > Security tab. (File > Properties > Security)”.



4. Is the document language set?

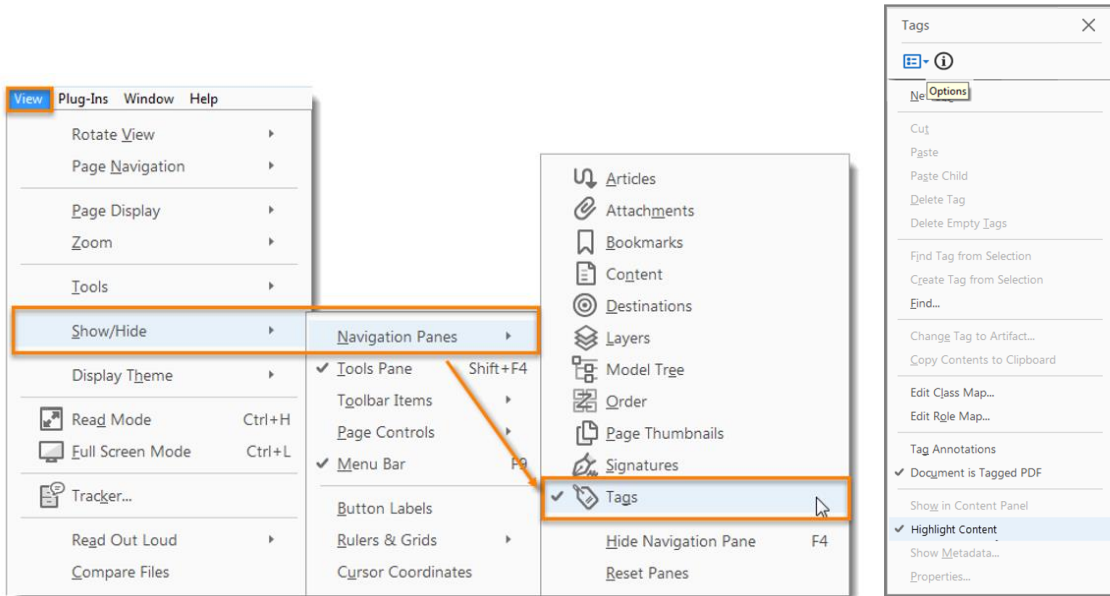
- Open “Document Properties > Advance” tab (File > Properties > Advanced)”



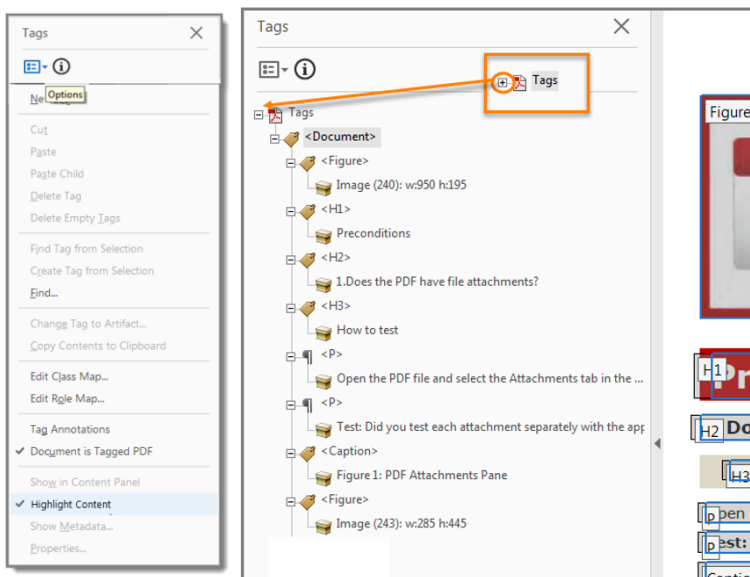
Structure Tags

5. Do the tags follow the visual/logical order of the document?

- Enable the “Tags” pane (View > Show/Hide > Navigation Panes > Tags)
- Enable “Highlight Content” from the Tags pane “Options” menu.

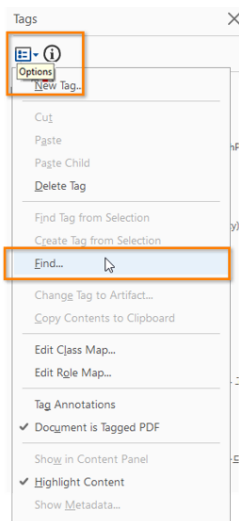


- Select the plus symbol on “Tags” to expand all tags.
- Press “Ctrl + A to select all tags. Use the up and down arrow keys to move through the tags.



6. Does the document have decorative content?

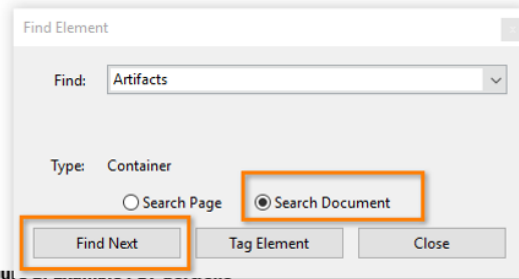
- Decorative content, should be set to Artifact so screen reader can skip over it.
- Open the “Tags” pane (View > Show/Hide > Navigation Panes > Tags). Select “Find” from the “Tags Options” menu. In the “Find Element” window, select “Artifacts > Search Document > Find > Find Next” to move through all artifacts in the document.



Adobe PDF 508 Checklist - DRAFT

Preconditions

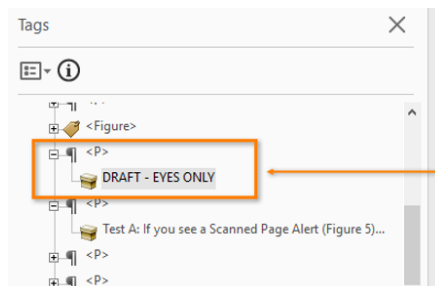
1. Does the PDF contain a collection of documents (PDF Portfolio)?



...types like PDF, MS
...ent inside the Portfolio
...s, if available.
...le file types, open each
...ct the Accessible

7. Is vital information in headers, footers, and watermarks duplicated in the document?

- Locate the first page or section the vital information applies.
- Highlight the second instance of the vital information on the same page.
- Open the “Tags” pane (View > Show / Hide > Navigation Panes > Tags). Find the tag corresponding to the vital information. (Tags Pane > Find Tag from Selection).
- Image shows example of vital information repeated as tagged content.



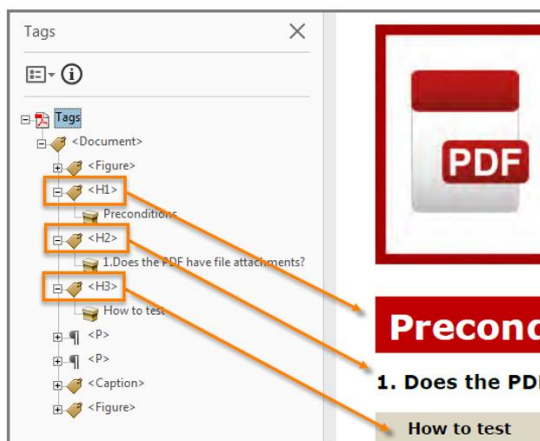
Adobe PDF 508 Checklist - DRAFT - EYES ONLY

DRAFT - EYES ONLY

Test A: If you see a Scanned Page Alert (Figure 5) when you further guidance.

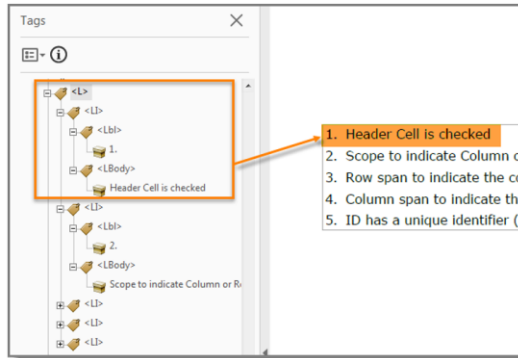
8. Are the headings in the document tagged with heading tags? Do the heading tags correspond to the document headings and follow the visual outline.

- Open the “Tags” pane (View > Show/Hide > Navigation Panes > Tags). Select a heading tag (<H1>, <H2>, etc)
- Image show example of headings that match the visual outline and hierarchy.



9. Are lists tagged correctly?

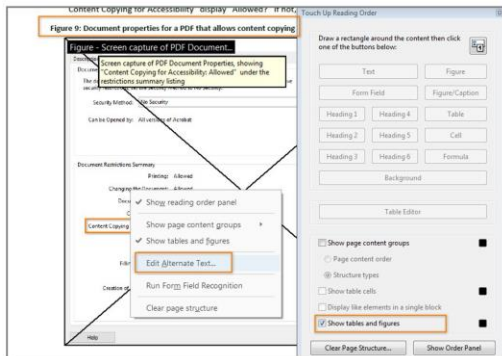
- Open the “Tags” pane (View > Show/Hide > Navigation Panes > Tags). Locate bulleted, numbered or multilevel list in the document.
- Highlight the list content and find its corresponding tag (Tags Pane > Options > Find Tag from Selection). Expand the list tag.



Objects

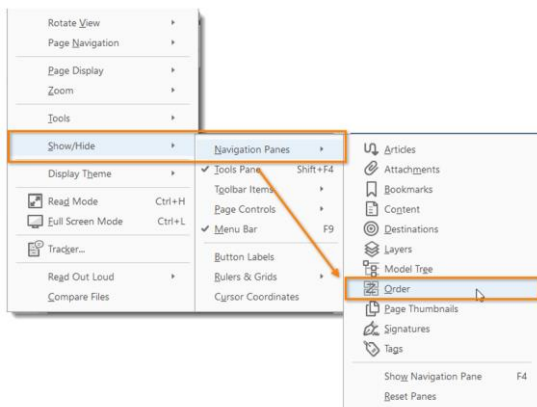
10. Do all meaningful images and other objects in the PDF have a description of their purpose or function?

- View “Figures” (Tools > Accessibility > TouchUp> Reading Order). Check “Show tables and figures”
- Right-click the content tagged as “Figure” and select “Edit Alternate Text.”



11. Does the PDF have data tables?

- Data tables in PDFs must be tagged as “Table.” Column and row header cells must be tagged as “Table Headers”.
- Locate data tables. Open the “Order” pane (View > Show/Hide> Navigation Panes > Order)



12. Are data table marked as “Table”

- Find all programmatically identified tables and check if table header cells are tagged as table headers.
- Open the “Order” pane (View > Show/Hide > Navigation Pane > Order)
- Open the “Table Editor” (Right-click on the table > Table Editor.
- Select “Show cell type (TH or TD)” checkbox)

TH 2015 Q1 (actual)	TH 2015 Q2 (actual)	TH 2015 Q2 (actual)	TH 2015 Q2 (actual)	TH FY 2016 Q1 (projected)	TH 2016 Q2 (projected)	TH FY 2016 Q2 (projected)
TD 17 started	TD 16 started	TD 12 started	TD 1 started	TD 34 started, 38 (anticipated)	TD 12 start	TD 5 start
TD 25 ended	TD 13 ended	TD 68 ended	TD 5 ended	TD 5 ended	TD 35 end	TD 65 end
TD 112 ongoing	TD 115 ongoing	TD 59 ongoing	TD 55 ongoing	TD 122 ongoing	TD 99 ongoing	TD 39 ongoing

13. Does the PDF have links and controls?

- Links and controls must:
 1. Be uniquely identified
 2. Describe the destination, function, and/or purpose in the name or within context
 3. Be in a tab order that matches the visual/logical order of interactive elements (links, controls, and form fields)
- Press the Tab key to find links and user controls.
- Check that each link has an unambiguous name that describes its destination, function, and/or purpose
- **OR** that this is determinable within context.
- For images that are a link or user control, the alt-text may contain the link purpose, function, or destination.

14. Is the PDF a fillable form?

- All form fields must have a tooltip and the tool tip must match its label or instruction.
- Press the tab key to find form fields (text fields, radio buttons, checkboxes, combo boxes, etc.). The tab order must match the visual layout of the form.

Registration Form

First Name	<input type="text"/>	Midd
Last Name	<input type="text" value="enter First Name"/>	Date
Address 1	<input type="text"/>	

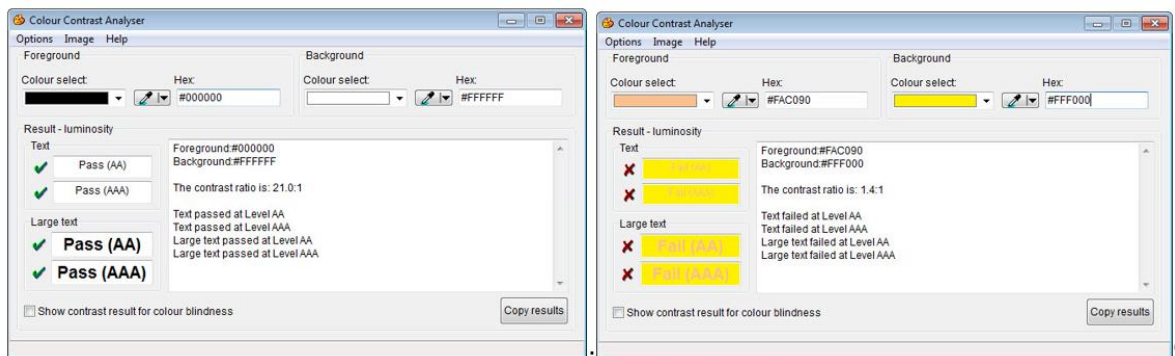
15. Are colors and other visual characteristics (such as size, shape, and location) convey information also described in text?

- Find where you have used color and/or other visual characteristics to convey meaning such as green, yellow, red, etc.

Project	Status	Project	Status
A	[Red Box]	A	late
B	[Yellow Box]	B	at risk
C	[Yellow Box]	C	at risk
D	[Green Box]	D	on time
E	[Red Box]	E	late
F	[Green Box]	F	on time
G	[Green Box]	G	on time

16. Is the color contrast ratio between text and background sufficient? Does the color contrast ratio (AA) for text pass 4.5:1 and large text (3:1) standards?

- Execute the [Colour Contrast Analyser](#).
- Select Download (the application can be executed without downloading it onto your computer).
- Open the Colour Contrast Analyser.
- Drag the “Foreground” eyedropper icon over a sample of your text or image of text.
- Drag the “Background” eyedropper icon over a sample of your background color



Accessibility Checker

17. Run the Accessibility Checker. Results of accessibility issues will display as

- Issues – Issues are identified as Passed, Failed, or Question Marked.
 - Passed – Acrobat did not find accessibility error
 - Failed issue - Click on issue, then click on **Fix**. Acrobat will attempt to fix the issue.
 - Question Mark – content must be reviewed manually. Acrobat provides an explanation for identifying questionable issue.