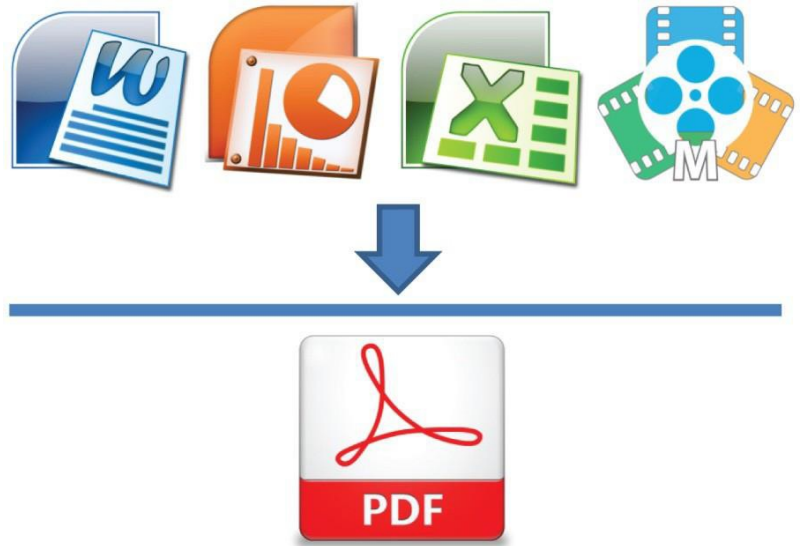


# Housing Innovations (HI) Section 508 Guide



This document contains basic recommended guidelines for development of documents, PDF files and HTML pages.

# Introduction to Section 508

Section 508 was made part of the Rehabilitation Act of 1973 in 1998. Its purpose is to “...require Federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities.”

## What is 508 Compliance?

508 Compliance is a web-based standard by which documents, video, multimedia, and websites are developed to allow equal access to information for all individuals with sensory impairments. Individuals with visual or hearing impairments can then use assistive technology software to interpret the content and provide either screen captions or have the content read out loud to the user.

## Purpose

Section 508 requires that when any federal agencies and federal contractors develop, procure, maintain, or use electronic information technology, any person with a disability has access to and use of information, and data that is comparable to the access and use by federal employees who are not individuals with disabilities.

## How does this law impact Housing Innovations?

- All federal agencies and federal contractors are required to ensure that their websites and the contents are compliant with Section 508 of the Act.
- Video that appears on government websites must be captioned for the deaf and hard of hearing.
- PDF documents and forms on government websites must be accessible to blind and low vision individuals, both government employees and the general public.

## Handbook for Creating Section 508 Compliant Documents

Element	Description	Quick How To
<b>Bookmarks and Table of Contents</b>	Use Bookmarks or a Table of Contents (TOC) for documents over 9 pages. Create using Word's Bookmark or TOC feature. Check that Bookmark or TOC entries hyperlink to the correct locations in the document.	<ol style="list-style-type: none"> <li>To create bookmarks, click "Insert" then "Bookmark."</li> <li>To create a TOC, click "References" then "Table of Contents." Select a TOC style.</li> </ol>
<b>Bullets and Numbering</b>	Use the automatic list formats available in Word. Do not manually type lists preceded by special characters, such as hyphens or asterisks. Wingdings are not acceptable bullets.	Click "Home" then the "Bullets," "Numbering" or "Multilevel List" icon.
<b>Color Contrast</b>	Text must be easy to read in comparison to the background. Use very dark-colored lettering on a white or light-colored background.	Test color contrast by printing in grayscale or by using one of the color contrast analyzer tools found online.
<b>Color Emphasis</b>	Do not use color for emphasis without providing an alternative method of emphasizing text (e.g., bold, italics, or both); do not use color alone.	Example: Use the <b>provider directory</b> to find a list of doctors in your area.
<b>Comments and Tracked Changes</b>	Remove all comments from the text. Accept or reject tracked changes and turn off Track Changes.	<ol style="list-style-type: none"> <li>Right click on comment then select "Delete Comment."</li> <li>Click "Review" then "Accept" or "Reject" changes.</li> </ol>
<b>Flashing, Flickering, or Animated Text</b>	Do not use flashing, flickering, or animated text.	--
<b>Fonts</b>	Use recommended fonts: Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri.	See "Style Elements" below. You can modify a style to change the font.
<b>Footnotes</b>	Create footnotes using the Footnotes linking tool.	Click "References" then "Insert Footnote."
<b>Page Breaks</b>	Use page breaks instead of hard returns to move text to the next page.	Click "Insert" then "Page Break." Or click "Page Layout" then "Breaks."
<b>Page Numbering</b>	Use automatic page numbering fields.	Click "Insert" then "Page Number."
<b>Paragraph Spacing</b>	Use paragraph spacing instead of hard returns or tabs to increase spacing between paragraphs.	Select one or more paragraphs. Click "Page Layout," then under "Spacing," adjust space "Before" and "After."
<b>Print Preview</b>	View the document in Print Preview and check to see if it flows correctly from page to page. Look out for image placement, table format, and stray ("orphaned" or "widowed") lines and characters.	Click "File" then "Print." A preview of the document automatically appears on the right-hand side of the screen.
<b>Style Elements</b>	Create a hierarchical structure using Word's style formatting. Use Style elements (e.g., Heading 1, Heading 2) or a Multilevel List (e.g., Heading 1 to Heading 2 to Body Text).	Click "Home" then select desired style from the "Styles" ribbon. Or click "Home" then the "Multilevel List" icon.
<b>URLs and E-mail Links</b>	All Web citations (URLs) and e-mail addresses must be correct, complete, and linked to an active Web or e-mail destination.	Example: <a href="http://www.ctbos.org">http://www.ctbos.org</a> not <a href="http://www.ctbos.org">www.ctbos.org</a> Example: <a href="mailto:Jane.Doe@housinginnovations.us">Jane.Doe@housinginnovations.us</a>

## Document Layout and Formatting (above)

### Images

Element	Description	Quick How To
<b>Alternative Text (Alt Text)</b>	Provide alternative text descriptions (“alt text”) for all images, graphics, grouped images, and non-text elements that convey information. Do not provide alt text for images that are purely decorative.	Right click on image. Select “Format Picture” then “Alt Text.”
<b>Background Images or Watermarks</b>	Do not use background images or watermarks.	Click “Page Layout.” Select “Watermark” then “Remove Watermark.”
<b>Descriptive Text</b>	Provide descriptive text near a complex image such as a chart or graph.	In a paragraph right above or below the image, describe the information the image is intending to convey.
<b>Grouping Images</b>	Individual images, objects, or graphics on a page that make up one combined graphic image must be grouped as one object.	<ol style="list-style-type: none"> <li>1. Click on each object one at a time. Select “Page Layout” then “Wrap Text.” Make sure that “In Line with Text” isn’t selected.</li> <li>2. Hold the Shift key and click on each object.</li> <li>3. Click “Group” then “Group” again.</li> </ol>
<b>In-Line with Text</b>	Image layout must be set to “In Line with Text” for all images.	Click on image. Next, click “Page Layout.” Select “Wrap Text” then “In Line with Text.”
<b>Text Boxes</b>	As a general rule, do not use text boxes for graphics or floating text.	Exception: Text boxes are okay if the final format will be PDF or HTML.

### Tables

Element	Description	Quick How To
<b>Avoid Tabs or Spaces</b>	Do not use tabs or spaces to create a table-like structure. Instead, use Word’s table formatting.	Click “Insert” then “Table.”
<b>Blank Cells</b>	Avoid blank cells.	--
<b>Descriptions and Labels</b>	All tables should be described and labeled. Exception: In some cases labeling a table may not be appropriate. For example, a small data table in a presentation may not need a label.	Click “References” then “Insert Caption.” Insert a title or short description after the table number.
<b>Logical Reading Order</b>	Use a logical reading order from left to right, top to bottom.	--
<b>Merged Cells</b>	As a general rule, avoid merged cells.	Exception: Merged cells are okay if the final format will be PDF or HTML.
<b>Row and Column Headers</b>	Provide a descriptive heading for each row and column in a data table, starting with the first left-hand column.	--
<b>Row Page Break</b>	In Table Properties, uncheck “Allow row to break across pages” (no matter if your table fits on one page or spans multiple pages).	Right click within last table row on page. Select “Table Properties” then “Row.” Uncheck “Allow row to break across pages.”
<b>Table Header Row</b>	In Table Properties, check “Repeat as header row at the top of each page” (no matter if your table fits on one page or spans multiple pages).	Right click within the top table row. Select “Table Properties” then “Row.” Check “Repeat as header rows.”

## Simplified Table

Company	Male Employees	Female Employees	Total Employees	Year Founded
Acme Inc.	1400	600	2000	1947
XYZ Corp	600	400	1000	2011
123 Medical	750	400	1150	1973

## File Name

Element	Description	Quick How To
<b>Be Concise</b>	The file name must be concise, clear, and generally no more than 30 characters in length.	Example: 508HousingInnov-Ref.docx
<b>Spaces and Special Characters</b>	Do not use spaces or special characters in file names. Hyphens (-) are acceptable in file names.	Example: CommonElements.docx or Common-Elements.docx

## Document Properties, Complex Content, and PDF Conversion

Element	Description	Quick How To
<b>Complex Content</b>	If there is no other way to make the content accessible, provide a separate accessible version.	Example: Organizational charts are often complex. Provide a separate full-text version that is 508-compliant.
<b>Converting to PDF (if you have Adobe Acrobat Professional)</b>	Convert documents to PDF by using the Acrobat add-in on your toolbar (preferred method) or by clicking "File," "Save as Adobe PDF." Do not use "Print," "Printer," "Adobe PDF."	If the Acrobat add-in on your toolbar doesn't convert all of the formatting elements in your original document, try "File," "Save as Adobe PDF."
<b>Document Properties</b>	Fill out Title, Author, Subject (description), and Tags (keywords).	Click "File," "Info," "Properties." Choose item in "Properties" you wish to update.

## Web Content

- All functionality must be operable by keyboard.
- Valid HTML is key to making web sites accessible.
- Pay special attention to the following elements:
  - Images
  - Forms
  - Data Tables
  - Frames
  - Navigational Elements
  - Dynamic Content/Interactivity

## **Fixing Inaccessible PDFs Using Adobe Acrobat Pro DC**

It is always best if possible to start with an accessible source document (e.g., in Microsoft Word) and export to an accessible PDF. This way, if the document is edited later, the document's accessibility features will still be intact and when the document is exported again to PDF the accessibility features will again be passed to the PDF.

However, if the original source document is not available, accessibility features can be added to the PDF using Adobe Acrobat Pro DC.

**NOTE:** Modifying PDFs can have unpredictable results, and there is no "Undo". Save often! (Saving multiple versions is recommended)

### **Step 1. Does document have text?**

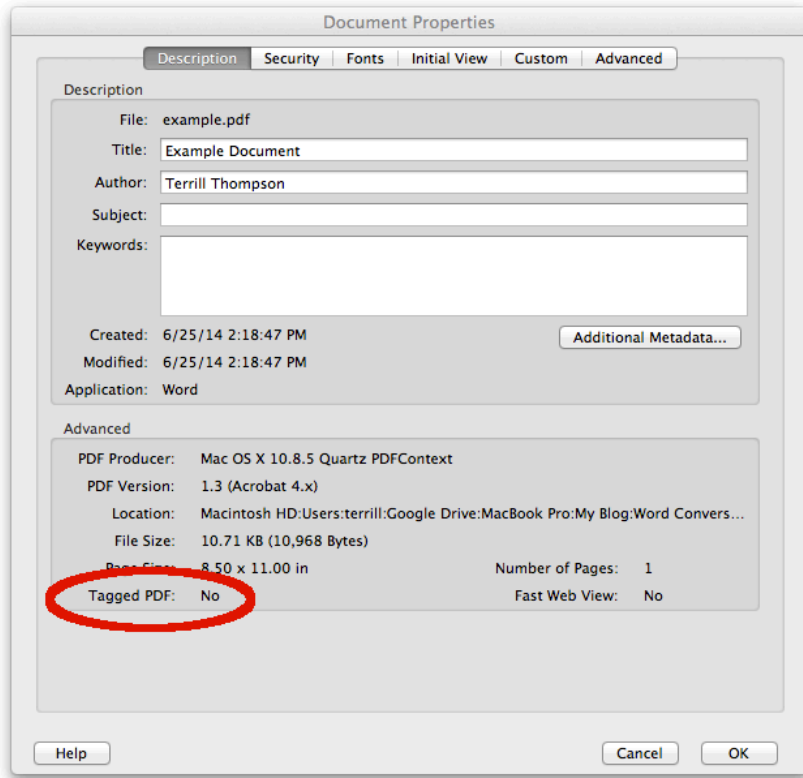
**How to test:** Try selecting text using a mouse, or select all text using Edit > "Select All" from the Acrobat menu.

**If No:** This is an image file and is not accessible. Convert to text using View > Tools > "Recognize Text."

### **Step 2. Is document tagged?**

**How to test:** Go to File Properties (Ctrl+D in Windows, Command+D in Mac). In the bottom left corner of the Document Properties dialog, see the "Tagged PDF" field.

## Handbook for Creating Section 508 Compliant Documents

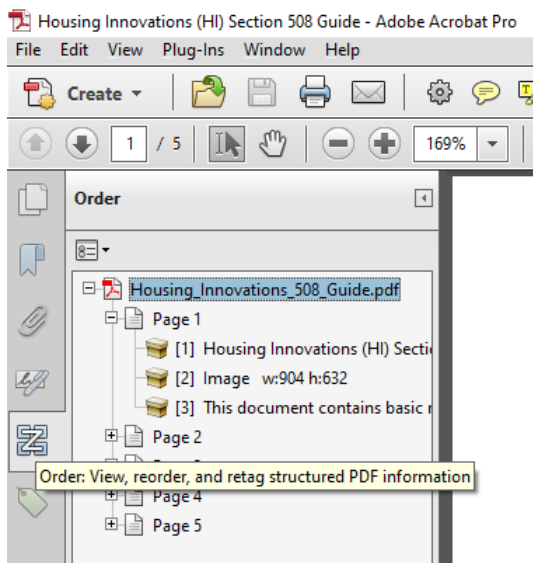
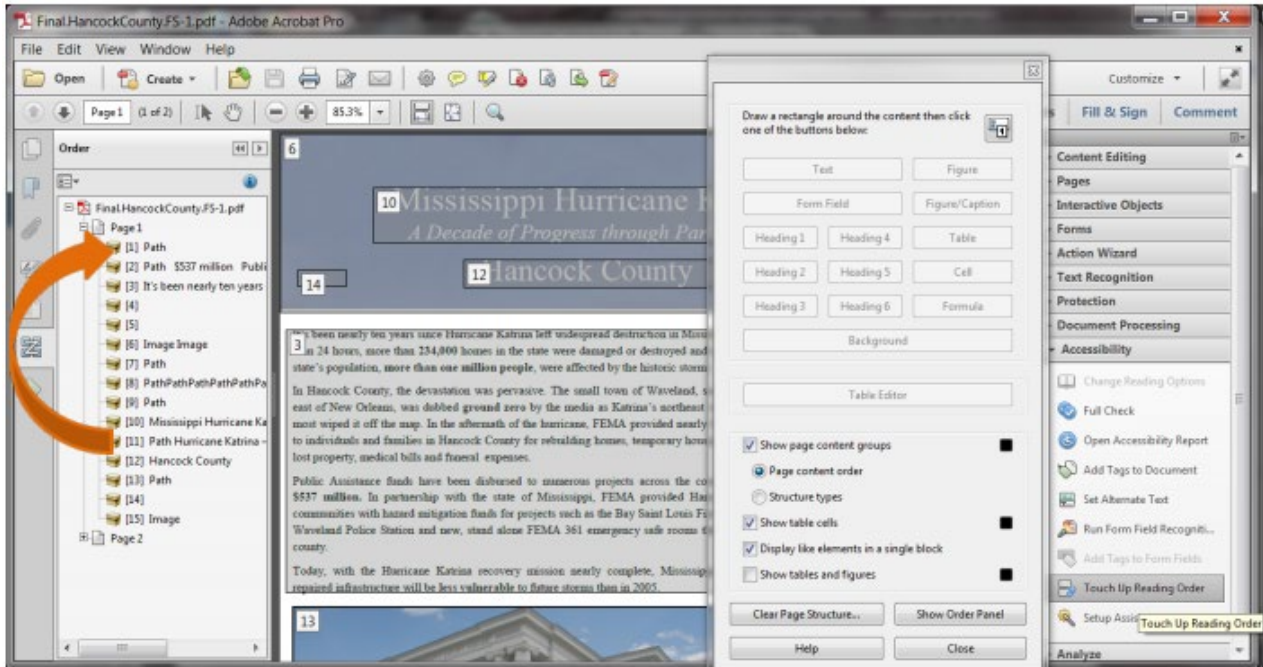


**If No**, this document needs to be tagged. Tags provide the structure on which accessibility is built. Add tags by selecting View > Tools > Accessibility > "Add Tags To Document."

### **Step 3. Does document need to be "touched up?"**

**How to test:** Use View > Tools > Accessibility > "Touch Up Reading Order" to see the order in which content on the current page will reflow if the document is viewed in a small window such as on a mobile device. This can also provide a fairly (though not entirely) accurate representation of the order in which screen readers will read the content. The page should be tagged in numerical order from top to bottom.

## Handbook for Creating Section 508 Compliant Documents



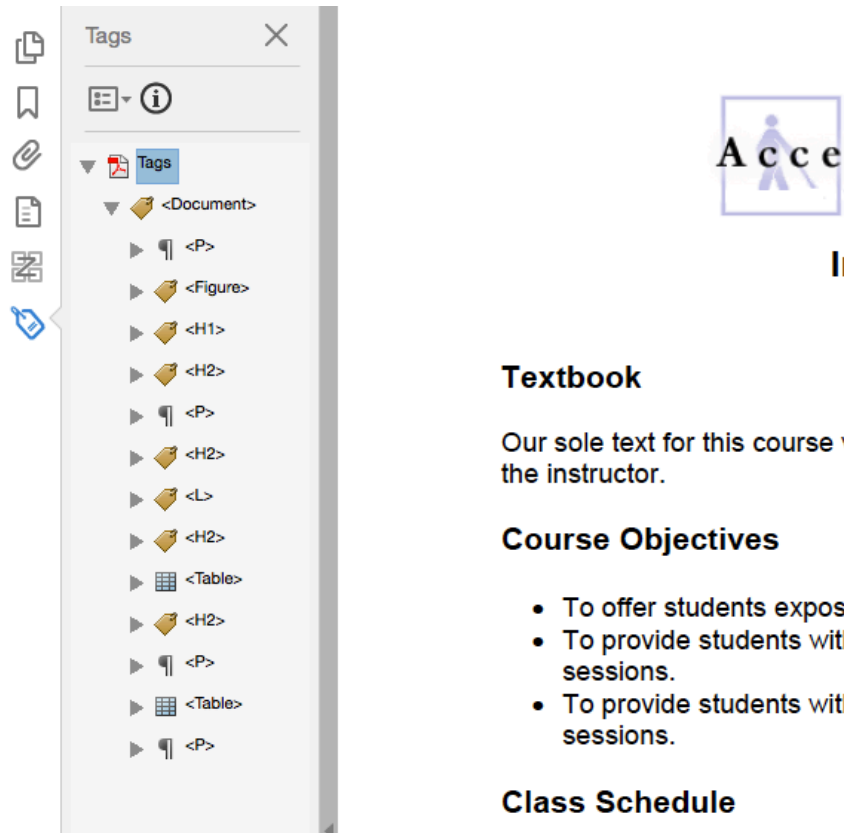
Some accessibility fixes can be made using this tool. Here are a few:

- Hide decorative or redundant images from screen reader users. To do so, click an image, then click "background"
- Add or edit alt text for informative images. To do so, right click on an image, then select "Edit alt text."
- Rearrange read order if needed. To do so, click "Show order panel," then drag items to their appropriate location.
- If the page includes data tables, click a table, then click the "Table Editor" button to edit accessibility features within the table.



#### Step 4. Are headings marked up as headings at appropriate levels?

How to test: Study the document visually to determine what the heading structure should be. Keep in mind that headings should form an outline of the page. Next, open the Tags Panel by selecting View > Show/Hide > “Navigation Panes” > Tags. The Tags Panel shows a tree of tags.



There are a variety of ways to explore the tag tree. For example, use Acrobat’s text selector tool to highlight text in the document (for example, a heading) then click the menu icon at the top of the Tags pane and choose "Find tag from selection." This will expand the tag tree if needed and highlight the selected tag.

Alternatively, click the menu icon at the top of the Tags pane and be sure "Highlight Content" is checked. Then click on any tag to see the content associated with that tag highlighted in the document.

Headings should be marked up with tags that are equivalent to HTML headings tags (i.e., <H1> for the main heading, <H2> for subheadings, then <H3>, <H4>, etc. Some authoring tools may create tags that have heading-like names (e.g., "<Heading\_Level\_1>"). However, these are not recognized by screen readers and will need to be changed.

**To change a tag**, right click on the tag, select Properties, then choose an appropriate tag from the list. If you know the what the correct name should be for a particular tag, you can also double-click the tag and type in the correct name.

### Step 5. Does other markup need to be fixed?

**How to test:** Follow the same instructions as in the previous step. However, rather than focusing specifically on headings, consider the overall structure.

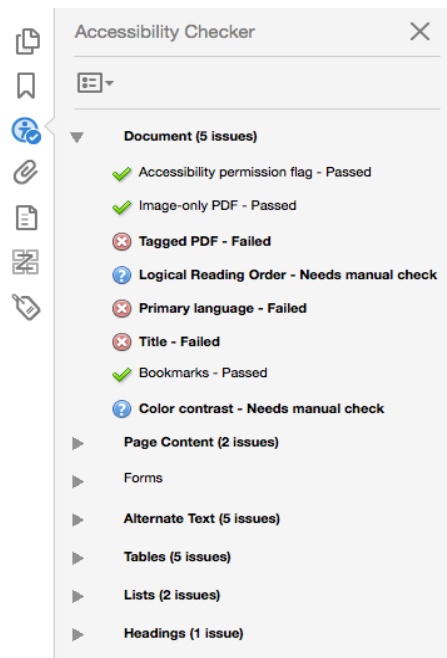
- Are lists tagged as lists?
- Does content in appear in a reasonable order? In Step 3 you checked the read order of content, and may have rearranged some items so they would flow in a meaningful order in a small window. While this order is typically close to the order of items in the tag tree, the latter is the actual order in which items will be read by screen readers. If items seem to be out of order in the tag tree, drag them to a better location.

Authoring tools generate a wide variety of tags. These typically aren't cause for alarm, as screen readers ignore most of them and render their content as paragraphs. As long as headings are tagged as headings; and lists, tables, and images are all tagged up appropriately, a document will likely be easy for screen reader users to navigate, read, and understand.

In some cases, the tag tree of a document is a total mess, and it might be easier to delete all tags and start over building them from scratch rather than try to fix the existing tags.

### Step 6. Check for any lingering errors.

**How to test:** Run the accessibility checker that is built in to Acrobat Pro. Select Tools > Accessibility > "Full Check" then read the report and follow the prompts.



The report lists items in various categories such as Document, Page Content, etc. Each item is

preceded by an icon indicating that the item passes, fails, or requires manual inspection. Right click on any item to see a list of options for fixing the problem or learning more about it.

This is the final step in our checklist, rather than the first step, because some documents generate dozens of errors that can easily be addressed with the first five steps. This way, the accessibility checker will report fewer problems and will be easier to read and work with.

## How To Create a 508 Compliant Microsoft Word Document

By using the built-in features within Microsoft Office, to include Word, you can avoid many of the most common mistakes related to accessibility. It is just as easy to build a 508 compliant document as it is to create a non-compliant one. In fact, using many of these built-in features makes creating a document much easier and faster. Follow the below guidelines and then visit the links on the right for more information and some video tutorials. The *blue italicized* items apply to **all** Microsoft Office Word, Excel and PowerPoint Documents.

## Best Practices and Most Common Issues related to Word Documents

### Style Headings

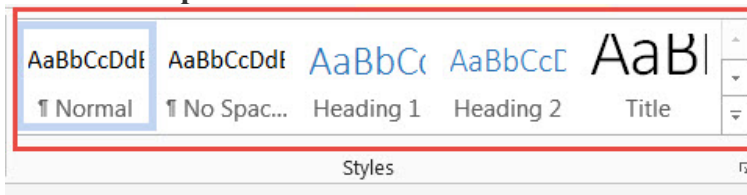
#### DOs

Use the built-in style headings to create a visual heading in your document. Styles can be found on the Home tab within the Styles panel.

#### DON'Ts

Do not manually create a heading by simply bolding or changing the font size or color.

#### Visual Example



### Bulleted & Numbered Lists

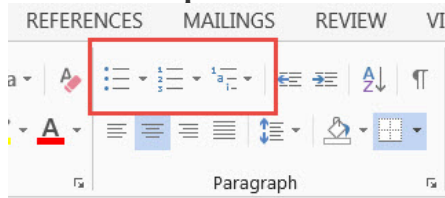
#### DOs

Use the built-in list feature for bulleted and numbered lists. Lists can be found from the Home tab within the Paragraph panel.

#### DON'Ts

Do not create a list by typing the number at the beginning of every line or typing a hyphen as an example.

### Visual Example



## Hyperlinks

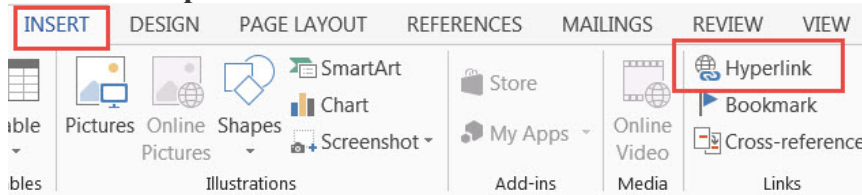
### DOs

*Create hyperlinks using descriptive words for the hyperlink. Hyperlinks can be inserted from the Insert tab and then Hyperlink on the Links panel. Always double check that your hyperlinks work.*

### DON'Ts

Do not use "Click here" or "More" as hyperlinks.

### Visual Example



## Alt Text and Captions

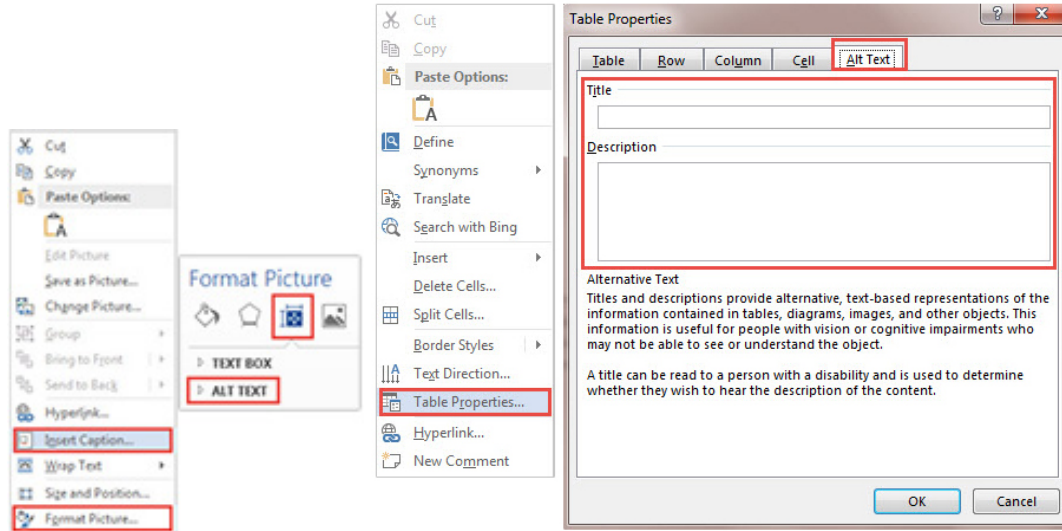
### DOs

*Insert Alternative Text (Alt text) and captions for informational images and tables. For Images, right click on the image and choose Insert Caption. Right click on the image and choose Format Picture and then, click the third icon over and click on ALT TEXT. For tables, right click on the table and choose Table Properties. The 5th tab is for ALT Text.*

### DON'Ts

Do not provide alt text or captions for non-informational or simply decorative images. When you run the accessibility checker this error should be ignored. The checker can only identify that the image does not have a tag. It does not know that it is a non-informational image. For informational images, the text should convey the same message as the image.

### Visual Example



## Multiple Images

### DOs

*If you have multiple images or objects that are layered over one another combine them into one image. You may be able to do this using the Group option or using a third-party tool such as SnagIt.*

### DON'Ts

Do not overlay or group several objects next to one another so they appear as one object.

## Color to Convey Meaning

### DOs

*When using color to convey meaning, add a non-color method as well such as text as shown in the visual example column.*

### DON'Ts

Do not use color alone to convey meaning.

### Visual Example

	Ready for Release
1	No
2	Yes

## Fonts

### DOs

*Use fonts that are clear and legible (e.g., Arial or Times New Roman), generally in the 10 to 14 point range. The spacing in the document should be enough to show paragraph breaks clearly. Spacing between lines should be at least 120% of the font size. This is the default in Word.*

### DON'Ts

Do not use fancy fonts that are more decorative than functional. This is especially important in headings.

## Table of Contents

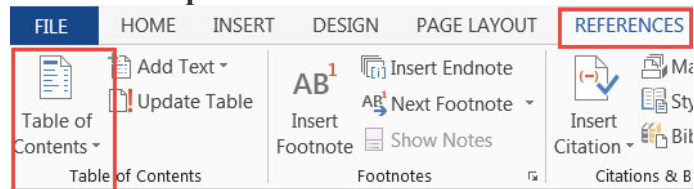
### DOs

Use the built-in Table of Contents feature to build a table of contents in a document. The Table of Contents feature is found on the Reference tab within the Table of Contents panel.

### DON'Ts

Do not type a table of contents manually.

### Visual Example



## Tables

### DOs

Only use tables to represent tabular information. Ensure that there are row and column headings and do not merge cells.

### DON'Ts

Do not use a table for aligning text or non-tabular data. Do not merge cells.

## Comments and Track Changes

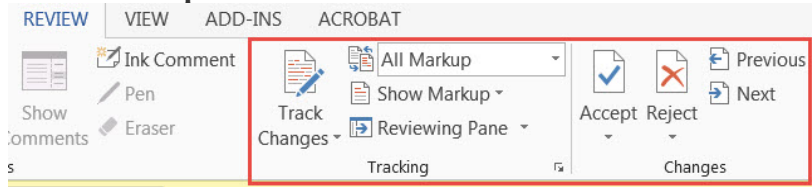
### DOs

Finalize your document by **removing all** comments and accepting or rejecting track changes. Under the Review tab, ensure you are seeing all markup and that none display in the document.

### DON'Ts

Do **not** have comments, annotations, or tracked changes within your final document.

### Visual Example



## Color Contrasts

### DOs

*Use a strong color contrast between text and backgrounds. Black and white is always a good choice. This is not usually checked via Microsoft applications. It requires a visual check.*

### DON'Ts

Some examples for Don'ts: Do not use white text on a light gray background. Do not use red and green text and highlighting together. Do not use red text on a black background.

## Accessibility Checker

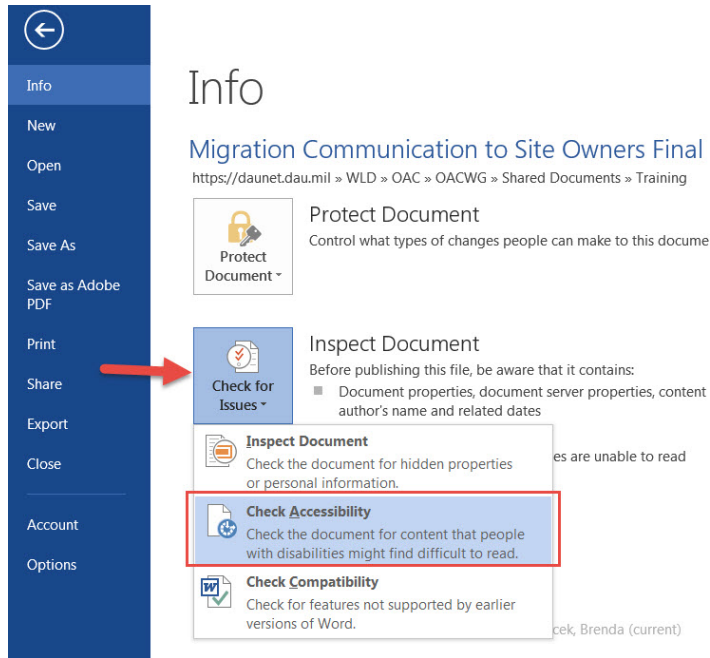
### DOs

*Always run the accessibility checker when you are finished with your document to see if any issues are identified, then remediate those items prior to publishing your document. You access the checker by clicking File, the Info menu option will display and then select Check for Issues drop down and select Check Accessibility.*

### DON'Ts

Don't assume your document is good, always run the checker as a double check.

### Visual Example



## MS Office Accessibility Checker - Understand the inspection results

After Accessibility Checker inspects your content, it reports the inspection results based on the severity of the issue found, categorized as follows:

- **Errors.** Issues that are reported as errors include content that is very difficult or impossible for people with disabilities to understand.
- **Warnings.** Warnings, in many cases, mean that the content is challenging for people with disabilities to understand.
- **Tips.** Tips let you know that, even though people with disabilities can understand the content, it could be better organized or presented to improve their experience.

## Reference Sites for Section 508 (Information Technology)

[Creating Section 508 Compliant Electronic Documents](#)

This training provides step-by-step instructions on creating Section 508 compliant electronic documents.

[PDF File 508 Checklist \(WCAG 2.0 Refresh\)](#)



# Handbook for Creating Section 508 Compliant Documents

## [Accessibility Basics](#)