A publication of the
National Wildfire
Coordinating Group

NWCG Guidelines for Creating Accessible Electronic Documents

July 2020
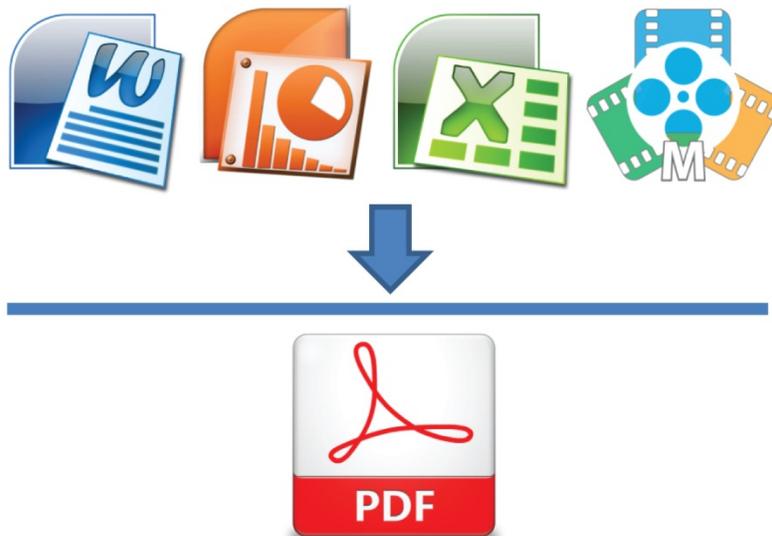
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Introduction to Accessibility

The National Wildfire Coordinating Group (NWCG) creates electronic publications, documents, presentations, and other materials that are readily available, cost effective, and environmentally responsible (https://www.nwcg.gov). NWCG is committed to ensuring the accessibility of all our products for everyone in our audience. One of the primary ways this is done is by meeting the requirements of Section 508 of the Rehabilitation Act of 1973, as amended [29 USC 794d]. Section 508 is a federal law that requires agencies to provide individuals with disabilities access to electronic and information technology and data comparable to those who do not have disabilities, unless an undue burden would be imposed on the agency (https://www.doi.gov/accessibility).

Section 508 also defines the technical requirements and criteria used to measure compliance. Web-based standards ensure equal access to documents, PDFs, presentations, video, multimedia, and websites for all individuals with sensory impairments. Individuals with visual or hearing impairments can then use assistive technology software to interpret the content using screen captions or have content read out loud. Video that appears on government websites must be captioned for the deaf and hard of hearing. Documents and forms on government websites must be accessible to blind and low-vision individuals, both government employees, and the general public. For more information on Section 508 visit https://www.section508.gov/.

Individual authors share responsibility for accessibility of NWCG products and documents. Follow the steps outlined here to create an accessible document. These guidelines will evolve with advances in technology and new methods for accessibility. They are targeted at users who are unfamiliar with making various products accessible but are not intended to limit advanced users.

NWCG Staff Support

NWCG has staff dedicated to editing, proofreading, formatting, and assisting with accessibility of NWCG publications and products. The process to finalize and make them available is faster and easier if the document is created correctly.

For NWCG publications that are part of the Publication Management System (PMS), specific guidance, and an accessible template are available, https://www.nwcg.gov/publication-portal-management. Please contact the NWCG Publications Manager for questions regarding specific publications.

Microsoft Word Document Creation

New Document Setup

Document Properties, also known as metadata, are details about a file that describe or identify it, including title, author name, subject, and keywords identifying the document's topic or contents.

This information can be viewed without opening the document and helps users decide whether to open it. Properties are also important for documents posted on websites. Search engines use this information to identify documents users might want to examine.

1. In MS Word 2016, open the document.
2. Click on **File.** Info screen will appear.
3. On the right side click on word **Properties**.
4. Click on **Advanced Properties**. Summary screen will appear.

Figure 1–Properties Dialog Box
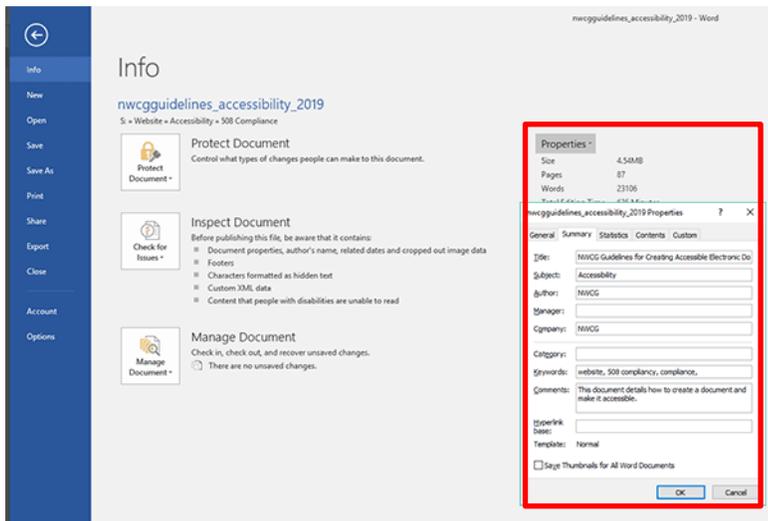
- **File:** Displays the name of the file. Use short descriptive names with a date.
- **Title:** Actual title of the document.
- **Subject:** Brief identification of the subject of the document.
- **Author:** Committee name.
- **Keywords:** The keywords are associated with the document during a search and will effectively rank the document for relevance. The closer the search words match your keywords, the higher the document will be ranked in the search. When using multiple keywords, separate them with a comma. Be sure to choose words relevant to the content.
- **Set a default language for the document.** Select the **File** tab and then **Options**. Select **Language** in the navigation panel. Be sure U.S. English is chosen as the default language. If it isn't, locate it in the drop-down menu and choose **Add**. Select **OK** when you're finished.

The following are some fundamental tips to help avoid common mistakes when converting MS Word documents to PDF. Avoiding these mistakes will help you save time, money, and frustration.

Font Group Versus Style Group

Figure 2–Home Tab Ribbon Bar

If you've always used the Font Group **on the** Home **tab of the** ribbon bar **to change the** font, size, color, etc., STOP.

Learn to use the **Styles** group. **Styles** allow the document to maintain formatting required for Adobe Acrobat to interpret the document's structure when converting to PDF. Styles also are instrumental in developing the Table of Contents (TOC) which allows for easy navigation in MS Word and bookmarks in PDF. This is probably the most important step you will take in creating accessible MS Word documents. Using the Font window to change a Style will break the formatting and your document will not be accessible. See **Styles**.

Tables
Everyone uses them, but there are very specific ways to create them. If constructed wrong, they are very time-intensive to fix in PDF. Please read the section on tables and learn the proper way to create them. See **Tables**.

Lists

Lists are also very time-intensive to fix in PDF. Always use the **Paragraph Group List** formats when creating bulleted or numerical lists. See **Bullets and Numbered Lists.**

Fillable Forms

The only way to create an accessible fillable PDF form is to create the fillable areas in the Adobe Acrobat PDF. Fillable areas created in other programs **will not** transfer when converted to PDF. See **Forms**.

Backgrounds, Fancy Borders, and Text Boxes

Backgrounds, fancy borders, and text boxes look nice but will cause many difficulties when trying to create an accessible PDF. Keep it simple and avoid them. When converted to PDF, backgrounds, fancy borders, and often text boxes are read as images, and text in text boxes will not read. Anything read as an image will require **Alternative text (Alt text)** within the PDF or must be converted to backgrounds. If you use them, they will have to be fixed from within the PDF. See **Avoiding Text Boxes.**

Symbols

Special characters using fonts such as Wingdings are likely to fail. Due to encoding errors which are **very** hard to fix in PDF. Instead, on the **Insert Tab,** use **Symbols** utilizing a standard font, or **Alt + Keys** to create special characters such as check boxes, etc. If you get encoding errors in your PDF, you've used the wrong type of characters. See **Symbol Shortcuts**.

Special Effects

Unfortunately, all special effects applied to text are not accessible. Remove any drop shadows, glows, bevels, etc., from any text that is not inside a shape.

Additional Do's and Don'ts

Do

1. Include Alt text for all graphics/images. Summaries have to be done in the PDF as they do not stay when documents are converted to PDF.
2. Include appropriate keywords, document titles, and subjects under **Properties**.
3. Number your pages using the automated page numbers option. See **Page Numbering**.
4. Use page breaks (**Press Control + Enter)** to start a new page instead of hitting return until you reach a new page.
5. Put periods or commas at the end of each list item. This may not be grammatically correct, but assistive technology needs punctuation to recognize and pause at the end of a line of text. Otherwise, all list text would read in a continuous string.
6. Optimize and reduce graphic file size and dimensions in MS Word. See **Optimize Images and Graphics**.
7. Use an Underscore or Dash between words in a filename, never spaces. Spaces show up as "%20" when uploaded to a website.

Don't

1. Write-protect the document.
2. Put any personal information in the document.
3. Use a period, slash, or other special characters (!, @, #, $, %, ^, &, *, etc.) in the filenames. Periods are reserved for file extensions and are automatically appended to the end of a filename. Slashes indicate directory structure.
4. Underline text. It can make reading difficult for some.
5. Use all caps in body text.

Formatting Documents

Properly formatting a document is essential. It will create a clean and consistent look, save time when editing, and be much more accessible.

Styles

Styles are important to document creation. Styles not only affect the look of text, but they also embed structure codes which create bookmarks for PDFs and help screen readers to better navigate the document.

Rather than changing font size, color, and font-face from the Font Group on the ribbon bar, **use the built-in headings in the Styles group** so the structure of the document becomes screen-readable and navigable.

In MS Word 2016 the Styles tools appear on the Home tab of the ribbon bar.

Ideally, no more than 10 to 20 styles should be used. The fewer the number of styles, the cleaner the document is and the easier it is for assistive technology to understand the document structure and hierarchy.

1. From the **Styles** group, select the double-down button at the bottom right corner or **ALT + CTRL + SHIFT + S** to show the **Styles** window.

Figure 3–Styles Group Button
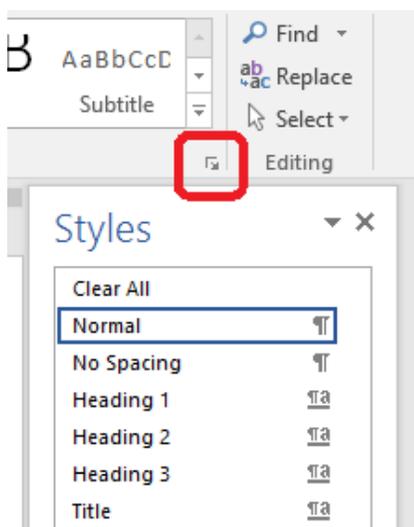
2. From the bottom of the **Styles** window select **Options…** to bring up the **Style Pane Options Window**.
3. Go to the **Select styles to show:** drop-down option and select **In use** to see the current styles in use within the document. You can choose the default, or select another. If you want to modify the styles, you can save them as a new template for later use. See below to learn how to create a Style Set.

More information on creating styles (paragraph styles such as text alignment or tabs) is available on the Microsoft website https://support.office.com/en-us/article/customize-or-create-new-styles-in-word-d38d6e47-f6fc-48eb-a607-1eb120dec563.

Headings

A good heading structure is an important accessibility consideration in MS Word documents. Headings will allow screen readers to navigate through the page easily and will make the page more usable for everyone. Heading structure also provides the bookmark formatting for PDFs.
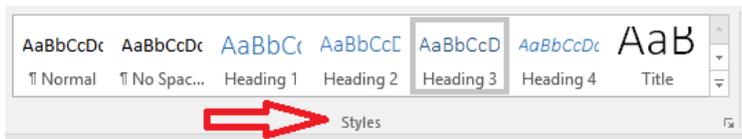
Headings should be used to convey structural information about a document — indicating main points and sub-points.

Figure 4–Heading Hierarchy
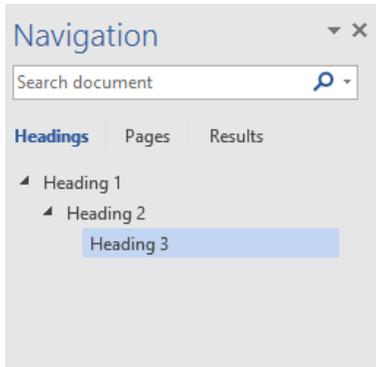
Headings create the necessary hierarchy for navigation in both MS Word and bookmarks in PDFs. Try to use only three heading levels to keep the TOC easy to navigate.

Figure 5–Built-in Styles Panel Group

Use Built-in, Predefined Styles to Create Titles, Section Headings, Captions, Etc.

- **Title:** used only for the document's title page (to be used only on the cover, or at the top of the document).
- **Heading 1 (H1)**: major headings in the document.
- **Heading 2 (H2)**: sub-headings of H1 in the document.
- **Heading 3 (H3)**: sub-sub headings of H2 in the document.
- **Body Text (body)**: avoid using Normal if you are extensively using styles in your document. Instead, create a **Body Text** style for your paragraph text-based on the Normal style. See below to create a style.
- **Captions**: use captions for figures and tables.

To change the appearance of a style, simply right-mouse-click on the style name and select **Modify**.

Strong vs Bold. Use Strong **from the** Styles **panel if you want a Screen Reader to STRONGLY pronounce a word ─ for example, someone yelling "Fire," and use bold when the word simply needs to visually be pronounced.**
Create A Style Set

Create a **Style Set** to be saved and used on other documents or shared with your committee so documents maintain a consistent theme.

To Setup or Alter a Style Set:

1. From the **Design** group, select **Style Sets.**

Figure 6–Style Sets Drop-Down Options
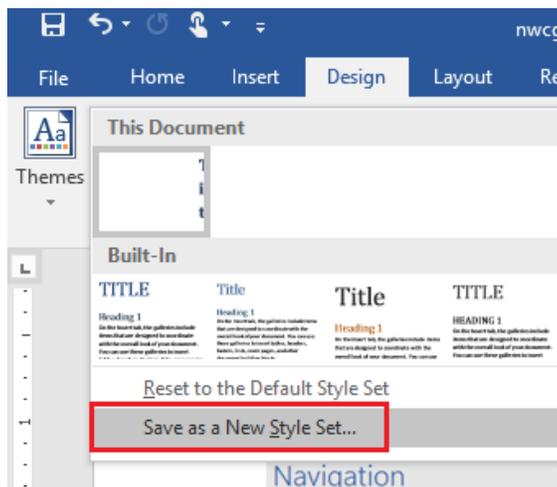
2. From the fly-out menu choose **Default**, or choose a style with elements you like, which you won't have to edit much.
3. Use the double-down arrows, or press **ALT + CTRL + SHIFT + S** to bring up the **Styles Pane**.

Figure 7–Styles Pane
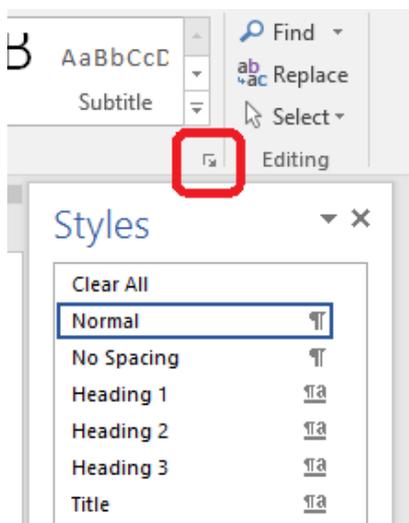
4. In the **Styles Pane**, change font, size, color, etc., by selecting a style element and using the arrow down button or **Right-Clicking**, and then select **Modify**.
5. If you don't see a style in the panel (e.g., caption, TOC, etc.), you can check to see if it is hidden, or add a new style by selecting the appropriate button at the bottom of the **Styles Panel > New > Style > Style Inspector** or **Manage Styles**.

Figure 8–Styles Options Buttons
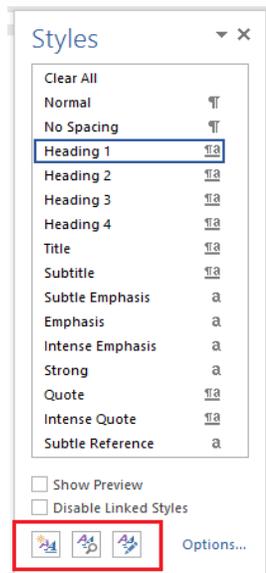
Note: It is suggested you limit your document to two fonts, and reserve one color for headlines or text you want to bring special attention to. Too much variety can cause the document to look busy and unprofessional, causing it to be hard to read.

DO NOT create a second set of headings or other elements in a **Style Set**. Acrobat will only recognize one of each.

Sharing Style Sets

You can share an electronic template of the document with your new **Style Set** with colleagues. They can then open the file and save the style as a **QuickStyle Set** that will be saved to their computer.

Recommended Fonts

Not all fonts are compatible with screen readers. As a general rule, Times New Roman and Arial are two of the most common fonts with the greatest readability and greatest cross-platform compatibility with Microsoft, Macintosh, and UNIX based systems.

We have provided a list of Microsoft tested fonts at the end of this document. See **Font Index**.

Table of Contents

Table of Contents (TOC) use the heading styles to determine the content structure of your document. You will not have to manually type a TOC.

1. Go to the first page of the document and place the cursor on the line just under the title and before any paragraph text. You may have to create a hard return to create a space to place your cursor.
2. Go to the Insert Tab > Page Break.
3. Next, go to **References Tab > Table of Contents**.
4. Select one of the preset styles.
5. A TOC will be generated.
6. You can place the cursor right under the **Table of Contents** and add another page break if you want the **Table of Contents** on a page.
7. As you add new sections with headings, you will want to place the cursor in the TOC, go back to the **References Tab > Update Table** next to the **TOC button** and select **Update Entire Table**.
8. The updated table will have your new sections if **Headings Styles** were correctly used.

9. To alter the number of levels within your TOC, click on the **Table of Contents > Insert Table of Contents**, and set the number desired.
10. Click **OK** and say **Yes** when it asks if you want to replace the current TOC.
11. Do not make manual changes to the TOC within the document or it will not work afterward. If you do, you will need to go to the **References Tab > Table of Contents > Remove the TOC**. You will then have to insert a new TOC following the steps previously mentioned.
12. If you want the **TOC** to be seen in the navigation pane, use **Heading 1**. If not, use **TOC Heading** found farther down in the **Styles** panel.

Paragraph Formatting

Paragraph formatting will help maintain the correct document structure.

Figure 9–Styles Panel Formatting
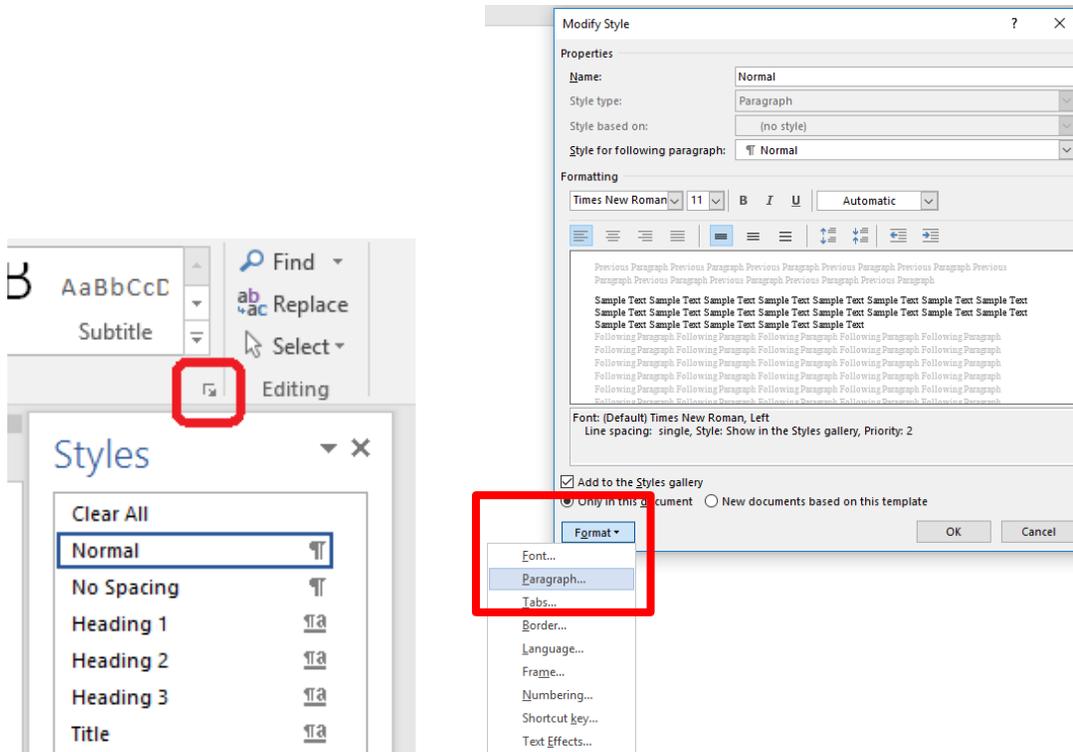
1. Use the double-down arrow to open the **Styles** panel.
2. **Right-Click** on the **Style** and choose **Modify.**
3. In the bottom left corner, open **Format**, and select **Paragraph**.

Figure 10–Paragraph Formatting Window
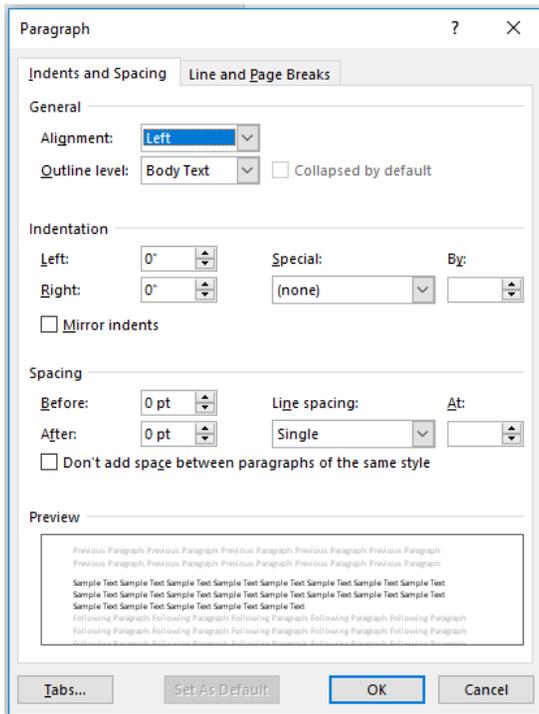
4. Set your paragraph options in the paragraph window (indents, spacing before, and after paragraph, line spacing, alignment, etc.).

Two common mistakes that can break styles formatting are:

1. Do not use the space bar instead of setting up the **Indent Text** in paragraph styles.
2. Do not use the **Tab** key instead of the **Center Text** option in the **Paragraph** group. Paragraph formatting should be done when setting up your styles from the **Styles** group panel.

Bullets and Numbered Lists

Avoid using graphical (or non-standard) bullets because they may not be recognized by some assistive technology. For a document to be fully accessible, create bullets, and numbers automatically, do not insert manually:

1. From the **Home** tab, click the **Bullets, or Numbering** icons in the **Paragraph Group**.
2. If you are selecting a bullet, choose a bullet style from the drop-down list.
3. If you are selecting a number, choose a number style from the drop-down list.
4. The bullet or number will appear in the text as you type.

Figure 11–Bullets and Numbered Lists Buttons
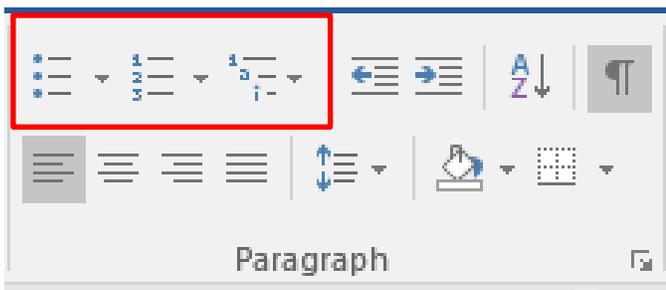
Group items as numbered lists (if they are sequential) or bulleted (if they are related) so they will be announced as lists by screen readers.

Captions

Use captions when inserting images or tables. If you need to insert more elements later, it will automatically renumber all other elements. We suggest inserting your caption above the graphic or table so the user is aware of what will be read next.

Figure 12–Insert Caption

You may either use menu bar **References > Insert Caption** or Right-Click > **Insert Caption.**

1. Under **Label** choose whether it is a figure or table.
2. Type a short description.
3. Create a new label style or set numbering preference. Example: Figure 1, or Figure 1.1 (chapter 1, section 1), Figure 2.1 (chapter 2, section 1), etc.

Update Caption Numbers
1. Click anywhere in the document and press CTRL+A to select the entire document.
2. Right-click, and then choose Update Field on the shortcut menu. All of the captions in the document should now be updated

Automatic Footnotes

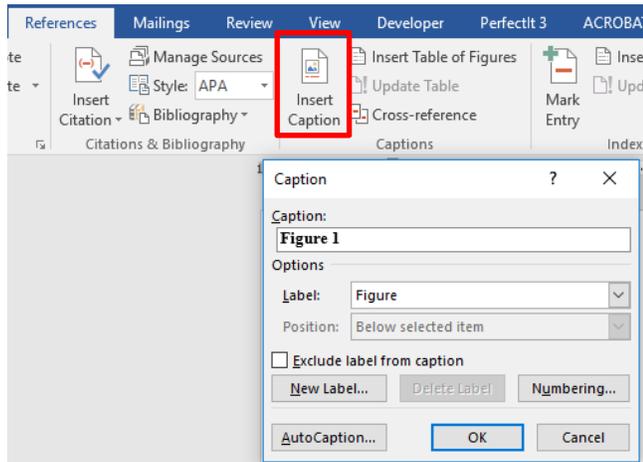When creating a footnote, use automatic footnotes instead of typing them in manually to make a document accessible. Number continuously if you are putting the notes at the end of the document, or by page if you will put your notes at the bottom of each page.

1. At the place in the text where the footnote is to appear, click **References > Footnotes > Insert Footnote**.
2. The footnote number will be added next to the text and the cursor will be placed at the bottom of the page.
3. Type the footnote text next to the footnote number. When finished, click back on the paragraph, and continue typing.

Headers and Footers

Do not place vital content in the header or footer. Screen Readers do not read content located in the header or footer. Use the header or footer area for things that don't need to be read for every page, repetitious content such as page numbers, document numbers, etc.

Insert a header or footer by going to **Insert Tab > Header and Footer** and choose a style in the drop-down. Or simply double click at the top or bottom of a page. To leave the **Header and Footer** area, double click in the main body of the document.

Page Numbering

There are two ways to insert **Page Numbers**, either directly on the page or in the footer area. Although either is correct, we recommend placing page numbers in the footer. Double click in the **Footer area** and insert a **Page Number** from the **Header and Footer** group. Inserting the **Page Number** in a footer keeps the page number from being read on every page.

Figure 13–Page Number Drop-down Options
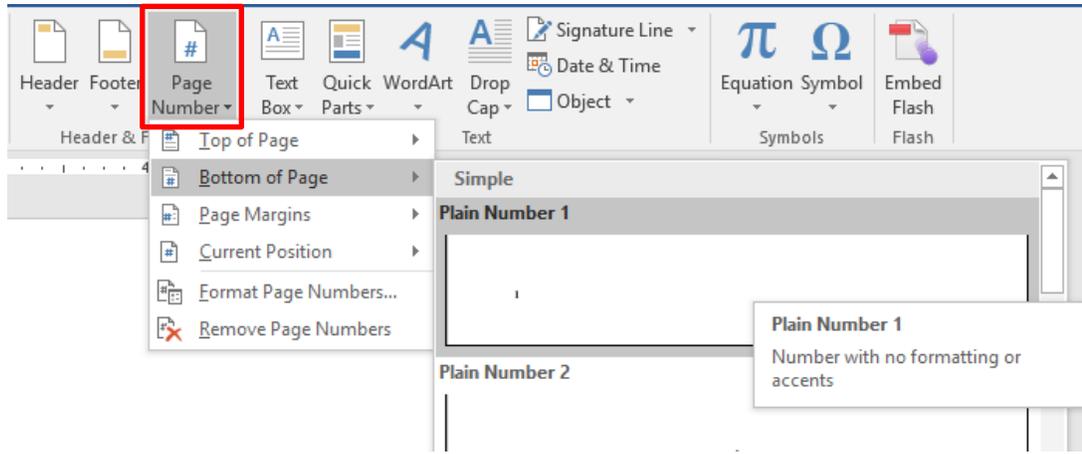
Start Numbering on a Different Page

If you will be using a title page and possibly a preface, you may want to start the numbering on a different page. To start numbering on a different page, instead of on the first page of the document, you need to add a section break before the page where you want the numbering to begin.

1. Click at the beginning of the page where you want the numbering to begin.
2. You can press **Home** to make sure you're at the start of the page.
3. On **Layout > Page Setup > Breaks**.
4. Under **Section Breaks > Next Page**.

Figure 14–Page Breaks
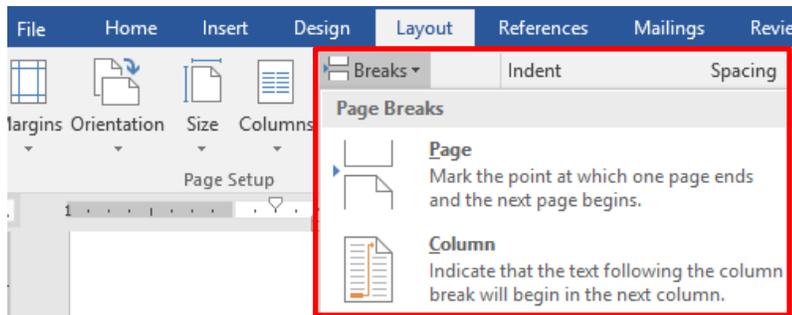
5. Double click in the **footer** area of the same page (near the bottom of the page).
6. This opens the **Header & Footer Tools** tab in the ribbon bar.
7. In the now visible **Header & Footer Tools > Navigation** group, click **Link to Previous** to un-highlight, which turns it **off**.
8. With your cursor still in the **footer** area, click on **Page Number** in the **Header & Footer** group on the ribbon bar and add page number to bottom (footer area).
9. To start numbering with 1, click **Page Number** in the **Header & Footer** group, then click **Format Page Numbers**, click **Start at,** and **enter 1**.

Figure 15–Format Page Numbers
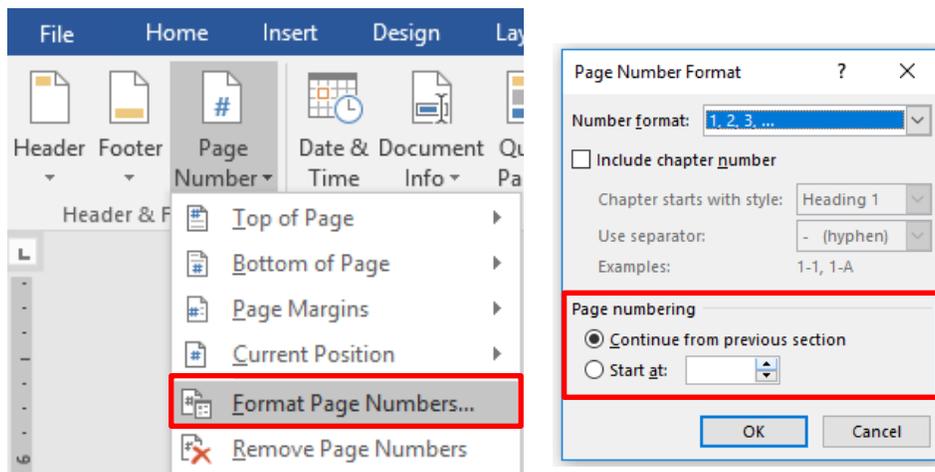
10. Double click in the body of your document to leave the footer area or click **Close Header and Footer** on the **Design** tab (under **Header & Footer Tools**).

Note: You may need to manually delete numbers from pages before the page break if your document already had numbers.

Avoiding Text Boxes

Text boxes provide a means to add text to a document and locate it anywhere on the page. Unfortunately, text boxes work more like images than text. Because of this, text boxes only show up in the Print Layout view, and Screen Reading technology is unable to access the information in a text box.

Instead of using text boxes, style formatting can be used to locate the text in the desired area on the page. Style (paragraph-level) formatting may take a few more steps to achieve than using text boxes, but style formatting is much more accessible for screen readers.

Text Box Alternatives

In-line text, using borders, is another alternative to text boxes. However, only use solid borders as several of the fancy borders will cause accessibility errors.

1. From the **Home** tab, open **Borders, and Shading.**

Figure 16–Borders and Shading
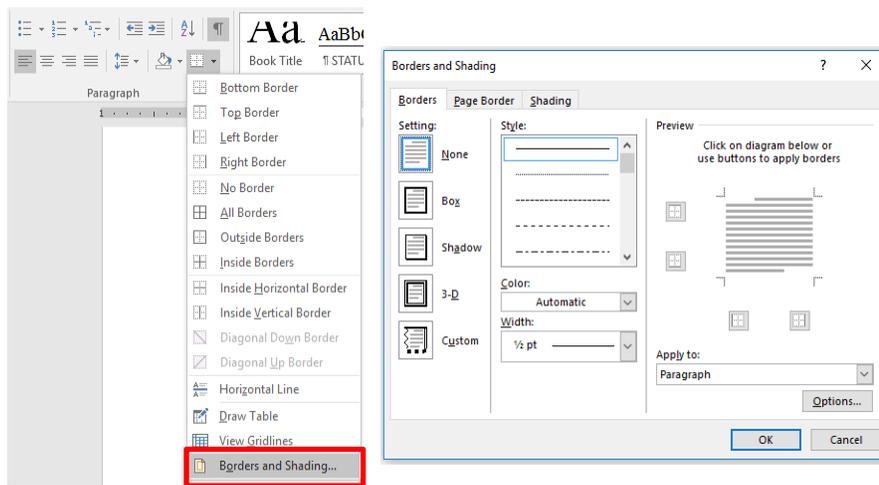
2. Set the style of a solid line you want (dashed lines will throw errors). Use shading to make it really stand out.
3. Use the **Margins** to set indents, left, or right, to give the appearance of a call-out text box.

Figure 17–Alternative Text Boxes

Styles

KEY POINT: A small percentage of the U.S. population considers smoke from wildland fires to be a serious issue. However, these individuals often have an existing health condition and can be the most vocal about health concerns – which can affect current and future management activities.
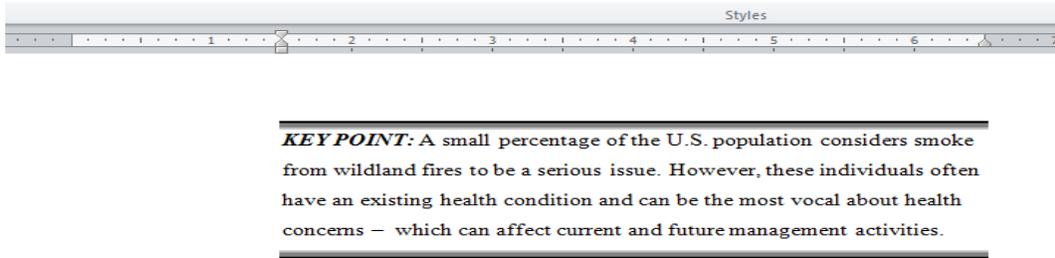
Figure 18–Set Margins

KEY POINT: Here is text set with a fancy border above and below. You can adjust line and paragraph spacing to create greater impact, as well. This paragraph also has it's left margin set to 1.5" to off-set the look.

KEY POINT: The text has been set to Copperplate gothic to give even greater visual impact, with line spacing adjusted to 1.5. A fancy border adds flair.

KEY POINT: this looks very much like a text box by setting the border to all four sides and giving it a colored background. The margins have been set to 1.5" left, and 1.5" right to create a centered box.

Another alternative to text boxes is to insert a picture, Wrap text, and add Alt text. This will allow a Screen Reader to see the picture and communicate the content and continue with the text.

Do not use a text box to insert a picture or graphic.

Placing Text in Shapes

Using shapes can provide a little more creative flexibility. Because a shape does not use formatted paragraph text and is not associated with a style. You can use the Font Group to customize the font, and you can add Text Effects as long as your text is in a shape. The shape looks like a text box but doesn't act like one. However, you will have to set the Wrap, add Alt text, and fix the reading order when saved to PDF just like images.

Insert Images and Graphics

While images and graphics will always need to be double-checked for reading order after saving to PDF, they have a better chance of maintaining the format when converted if **Wrap In Line with Text** is used.

To **Wrap In Line**:

1. Insert image or graphic.
2. **Right-Click** image or graphic and select **Wrap In Line with Text.**

Figure 19–Wrap In Line with Text
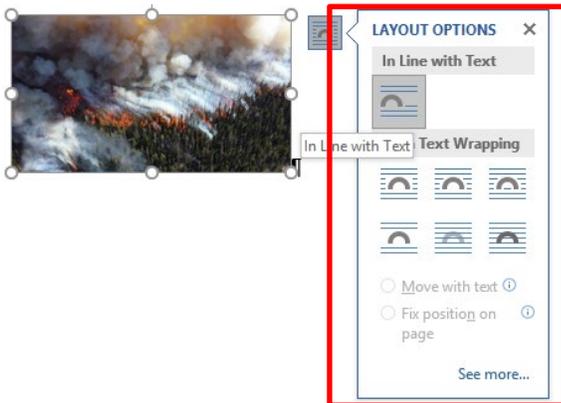
Alternative Text (Alt Text)

All photos, images, charts, diagrams, and other graphics that convey information **must have** an embedded Alt text label. This allows users who cannot see the image to understand what they are missing from the document. Each image must have a unique description in the Alt text label – even if the same image is used in more than one location in a document.

Without Alt text, screen readers say "picture" for each image. If you have several images in a row, the Screen Reader says, "picture, picture, picture, picture, picture" Not knowing what information is missing is frustrating for the reader and makes the document non-compliant.

Alt text should not supply the listener with additional details the visual reader would not also have. It is not a substitute for details that are important to include in the content of the document.

Any complex images, charts, tables, or other complex items should have a text caption before the item which explains what ideas the item is meant to communicate. The caption should communicate the ideas rather than a spatial narrative.

How to Insert Alt text:

1. Open any Microsoft Office document and select an image so that square anchors are visible. Small circles at the corners of the image will appear.
2. **Right-click** the mouse and select **Format Picture.**
3. In the **Format Picture** window, select the **Alt text** tab on the right, then insert the Alt text into the **Description** field. Click the **Close Icon** to finalize Alt text.

Tips for Writing Alt Text

- Try to answer the question "what information is the image conveying?"
- Alternative text should be fairly short, usually a sentence, or less, and rarely more than two sentences.
- If more description is required (for a chart or graph), provide a short description in the Alt text (a summary of the trend) and more detail in the long description, see below.

Figure 20–Insert Alt text
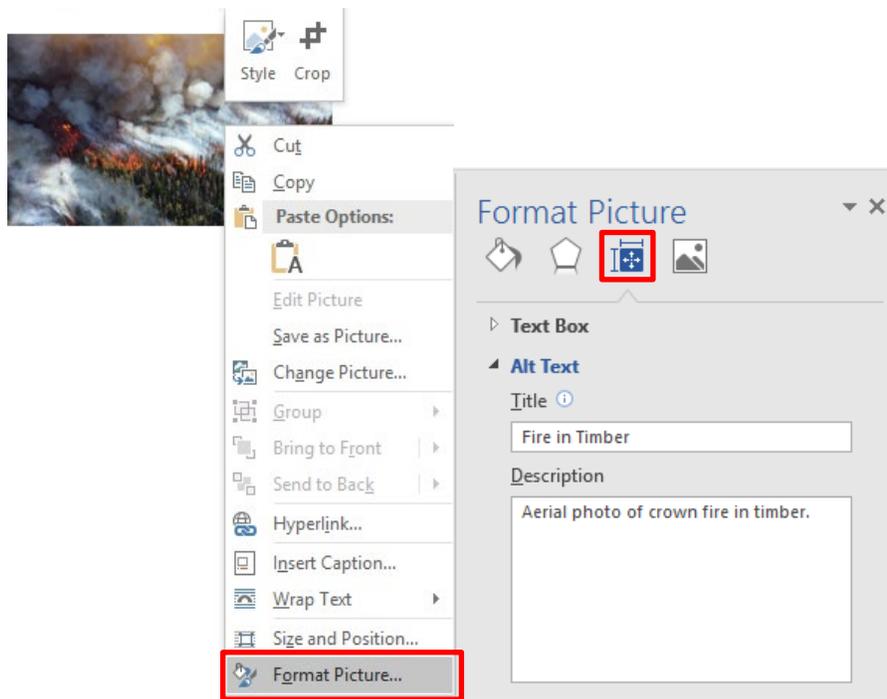
Example: The Alt text for figure 20 might read, "Heavy smoke and orange flames from burning ponderosa pine trees."

Use Long Description for Charts and Graphs

In some instances, an image is too complex to describe in a few words. Charts and graphs are primary examples of such images. Although there does not appear to be any limit to the length of text, Alt text is meant to be relatively brief and to the point.

If you have a detailed explanation for the image, you should present it in your caption, for example: "*Figure 10–Venn diagram of student access to fire training, explained below.*"

Including the long description below the graphic will add information that can be used by all readers, not just those with disabilities.

Optimize Images and Graphics
Reducing the file size of graphics creates a smaller document for posting on the internet. Depending on your abilities and software, there are a few ways to optimize or reduce the file size of your graphics. See the following examples for instruction on how to reduce image and graphic file size.

From MS Word:

1. To optimize graphics, you must select the image to see the **Picture Tools > Format** tab at the top of the ribbon bar.
2. Select **Compress Pictures** in the **Adjust Group** on left side of ribbon bar.

You will be prompted with these options:

Figure 21–Compress Pictures
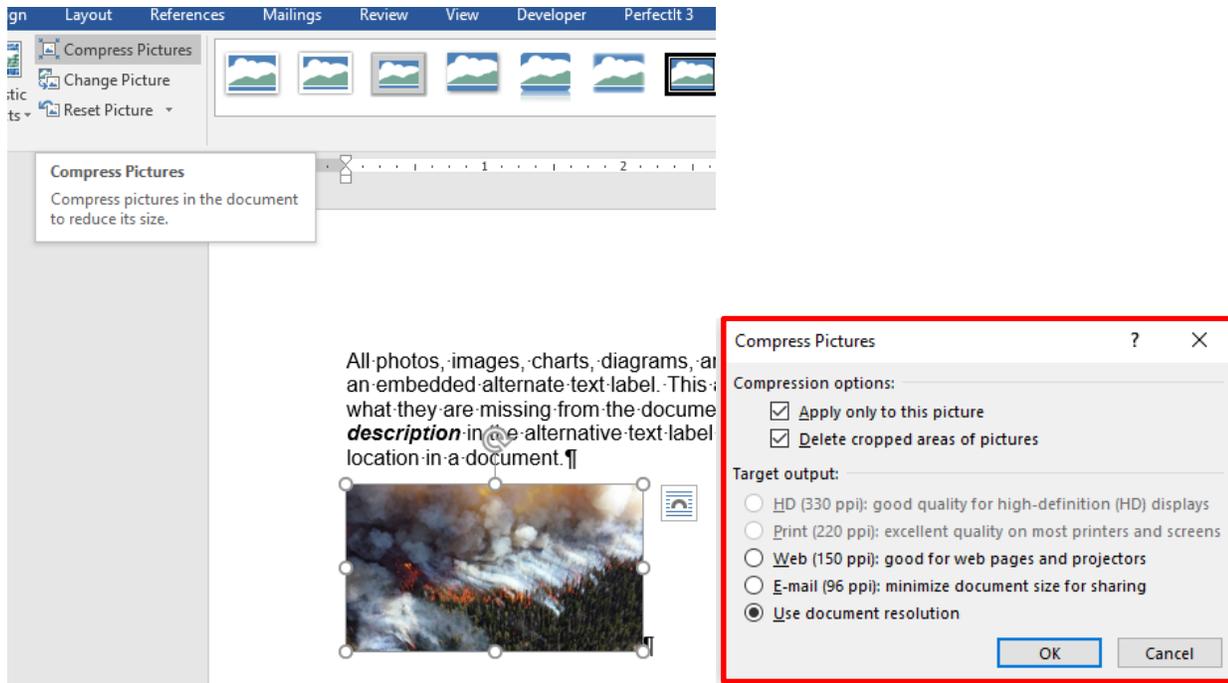
3. Check **Apply only to this picture**, or uncheck if you want to do all graphics in your document at once.
4. Check **Delete cropped areas of pictures**.

Note: You will not be able to recover any of the cropped area after this, so you should have original copies saved elsewhere.

5. **Web (75 PPI)** is suitable for documents that will be posted to the internet. Do not use less than 220 PPI if the document will be printed on a commercial press.

From the File Tab:

1. Select **File > Options > Advanced** and scroll down **to Image Size and Quality**.
2. Set default target output to 150 PPI. This will compress all images in the document at once.

Figure 22–Advanced Compress Pictures Option
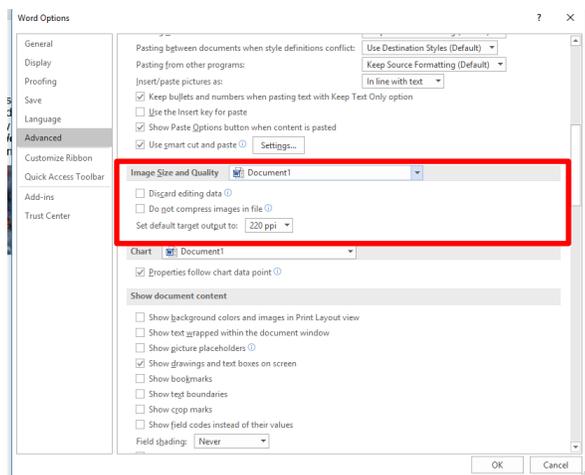
From a Graphics Program:

- Photos should be optimized (reduce file size) in a graphics program before including them in documents that will be posted to the internet.
- Use only GIF, JPEG, and PNG file formats.
- Set index colors at 256 or lower for GIFs.
- Turn off interlacing (it adds to the file size).
- Using transparency (transparent backgrounds) for GIFs and PNGs adds to the size of the file, so gauge the use of these against the importance of download time.
- Resolution for graphics should be no more than 96 dpi for the web and 200 dpi for print. Graphic dimensions should be no larger than 576 pixels wide by 736 pixels in height (equal to 8" x 10"– using graphics that may be 72 DPI, but over 1,000 pixels wide results in a file size of almost 14MB).
- When saving JPEGs:
  - Compress file at no lower than setting 6 (high). Compressing a JPEG more than that can cause the quality of the graphic to degrade.

  Note: Using Progressive Scan will add bytes to the file size.

  - Use either Baseline Standard or Optimized under Format Options.
- When converting graphics to a PDF, the PDF may not read the graphics in the correct order. The reading order needs to be manually checked in your final PDF and adjusted for accessibility. See **Touchup Reading Order in a PDF file** under the PDF section.

Grouping Images and Graphics

There is no way to group text, objects, **and** photos/images in MS Word. If you want to put text, arrows, and/or boxes on your photos/images, group them in a graphics program or in PowerPoint, then copy it back to MS Word so the objects will stay linked with the photos/images. A graphics program will flatten the layers when saved as a GIF, PNG, or JPEG (making it one graphic), but PowerPoint will group the individual elements. If you use PowerPoint, each element will still require Alt text before being grouped and saved back to MS Word. After copying back to MS Word, you will need to add the Alt text and Summary **again** for the group. If you ungroup the image after placing in MS Word, you will break the Alt text format of the group and have to start over.

Columns

- **Use the Columns command the Layout Ribbon.**
- Columns in your document? **Do not** use tabs to make space between your columns. Use the **Column** commands to create column styling within the document.
- All text you type in MS Word 2016 is already formatted in columns — if it's only one column of text per page, it still counts as a column. Clicking **Columns** command button in **Page Setup** group **> Page Layout** tab displays a menu of handy column-formatting options. Splitting your text into columns is as easy as choosing a column format from that list.
- To be more specific with the number of columns or their layout, choose the **More Columns** command, then use the **Columns** dialog box that appears to create and design multiple columns for your document.

Figure 23–Columns Drop-Down
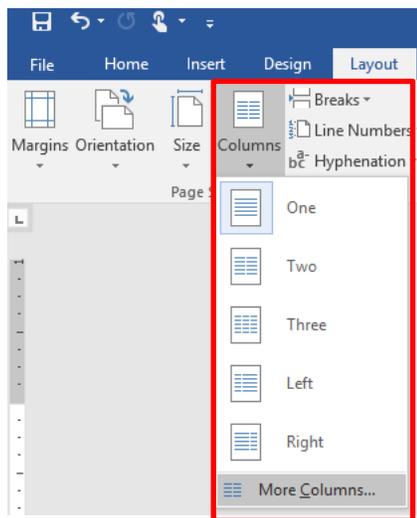
- **Mixing column formats:**
  - Your whole document doesn't have to have a one column format. You can split things up so part of the document is in one column and another part is in two columns, and then maybe another part goes back to just one column. The secret is to use the **Columns** dialog box. **Warning:** Mixing columns creates editing difficulties and can break formatting, which can become very time-consuming to fix during editing. Avoid columns if you have a large document or one that will go through the editing process several times.
  - When choosing a new column format, be sure to select the appropriate **Apply To** drop-down list. When you choose **Whole Document**, the format applies to the entire document.

Figure 24–Columns Dialog Window
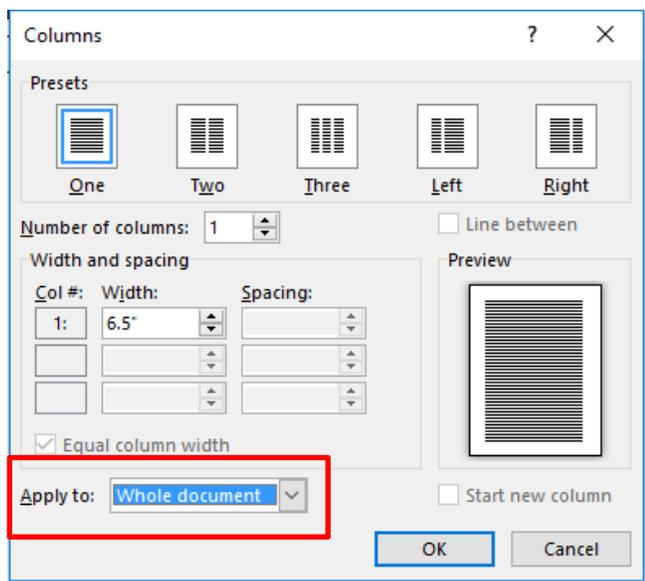
- **Going back to one column**
  - The easiest way to undo a multi-column document is to return it to a single column. From the **Columns** button in the **Page Layout** tab, choose the item **One**. This restores your document back to single column mode, which is the default MS Word document.

- o When a document is split into sections, or when you have multiple column formats sprinkled throughout a document, the process is a little more involved:
  - From the **Page Setup > Page Layout > Columns > More Columns.**
  - The **Columns** dialog box is displayed.
  - Choose one from the **Presets** area.
  - From the **Apply To** drop-down list, select **Whole Document.**
  - Click **OK.**

Strong Contrast with the Background Color

Individuals who have low-vision or color blindness may have difficulty reading documents if the text color does not strongly contrast with the background color. Over 5% of people have partial color blindness (either having difficulty distinguishing red from green or distinguishing blue from yellow) and choosing poor color combinations can make reading a struggle.

Readers with macular degeneration, glaucoma, or other eye diseases may have great difficulty reading small text or text without a high-contrast background.

The problem with colored text also arises in printing out documents on a black-and-white printer. If there is not enough contrast between the foreground and background colors, the words become extremely hard to read.

- Use text and page background color combinations of significant brightness and contrast.
- MS Word does not provide an option for testing high-contrast. Use the Operating System display settings instead. Turn on **High-Contrast** before starting MS Word. The Windows shortcut for switching to high-contrast mode is **ALT + Left SHIFT + Print Screen.**
- To produce multiple access/high-contrast documents, create a **MS Word Template** that uses a high-contrast foreground/background color combination.

To Check High-Contrast Combinations:

- Print the document in grayscale and/or turn down the color on the computer monitor.
- Examine items to ensure there is enough contrast for elements, e.g.
  - o Table headers (text versus background fill).
  - o Text in foreground versus background colors or images.
  - o Text in images.
  - o Watermarks versus text in foreground (the watermark should not interfere with the foreground text, as can happen when there is too little contrast).

Figure 25–Contrast Comparison

NO — Bad Contrast. Text and background too close in color.

YES — Good Contrast. Text is darker than background.

YES — Good Contrast. Background is darker than text.

Avoid Colored Text

Avoid the use of colored text as it makes the document less accessible for impaired readers. Readers who are red-green color blind can't tell which text is red and which is not in this example: "All the requirements for this project are in **red**."

If color is used, it should never be used alone to indicate a condition or category. Text or other notation must accompany the color to communicate the category or condition the color is meant to represent, as in the example below.

All the requirements for this project are in **red**.

Requirement: documents need to follow established formats.

Requirement: the file format for your paper must be in MS Word 2016 or newer.

Requirement: the paper must be 2,000 to 2,500 words including a cover page

Tables

MS Word does not provide an easy method for creating accessible tables. If you have complex tables it is highly recommended that a description or explanation of the table contents be included in the text of the document. If possible, construct the table so it will read logically from left to right, top to bottom order.

Tables are Only for Tabular Data

Screen readers expect a table structure to contain spreadsheet-like information (tabular data). It can become very confusing for users of screen readers if a table structure is used for page layout and design. It is important to restrict the use of tables to present tabular data.

Creating Tables

Use the **Insert Table** command to create properly formatted tables including specified row and column headers. Always include appropriate column headers to describe the contents of each column.

Figure 26–Insert Table
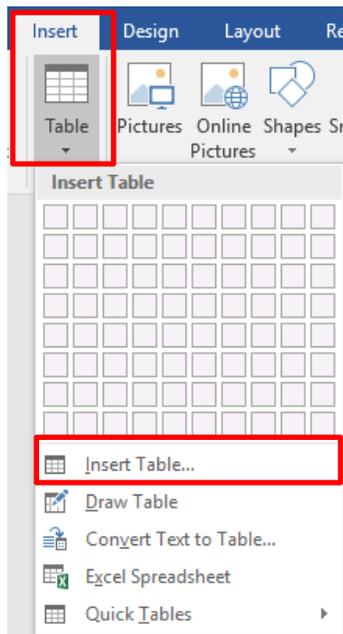
Label the Columns

When data must be displayed, it is important to provide appropriate column labels. Whenever possible, tables should be organized so they can be read from left to right a single row at a time.

Tables should be described in the body text of the document, just above the table, to provide blind users an introduction and structure before they start hearing the information from the table.

Merged or Split Cells

When merged cells are used, the number of columns or rows may not be uniform and screen readers will likely announce the wrong column header text with the data. MS Word does not provide the support for header and data cell association with row and column spans that assistive technology needs to properly announce header cell text. The author should ensure data tables have a one-to-one association between data and header cells. When creating a PDF, if there are merged cells the accessibility test will fail.

Place captions above tables, introducing the number, and title of the table.

Table 1.1 1–Table with merged cells (X in FY 2011 and FY 2010 represents there should be no merged cells).

Key Outcome	FY 2012 Target	FY 2011		FY 2010		FY 2009 Target
		Target	Actual	Target	Actual	
$'s left	Baseline	Base Line	$4,650.00	Base Line	$8,500.00	Baseline

Table 1.1 2–Table Fixed – no merged cells.

Key Outcome	FY 2012 Target	FY 2011 Target	FY 2011 Actual	FY 2010 Target	FY 2010 Actual	FY 2009 Target
$'s left	Baseline	Base Line	$4,650.00	Base Line	$8,500.00	Baseline

The following table shows how a table should look. Table number, title "Fires per Region" and then listed below: State, Fire Name, Acres Burned, and Ongoing. The name of the table is outside the **Table in the Caption** area and the table is arranged with a column representing each state and rows representing the fire name, acres burned, and if the fire is ongoing or not. To pass the **Accessibility Full Check you need to have the same number of columns as you do rows.**

Table 1.1 3– Fires per Region

State	Fire Name	Acres Burned	Ongoing
Idaho	Little Dino	500	yes
Texas	Big Red	1,300	no
California	Red Tree	45	yes

Indicate the Header Rows

When creating an accessible data table, Column, and/or Row headers must be designated. Identify the header row:

1. Select just the top row of your table, **Right-Click > Table Properties > Row**.
2. Check the box labeled **Repeat as header row at the top of each page**.

*Note: Alternate method is to select first row of table, select the table, go to **Layout** tab on menu bar and click on **Repeat as Header Rows** button.*

Restrict the Table Cells to a Single Page

1. Select the entire table, **Right-Click > Table Properties > Row**.

2. Uncheck the box labeled **Allow rows to break across pages.** Be sure there are no marks inside the box.

Attaching Alt text to a Table in MS Word

As with most objects in MS Word, you need to add Alt text to a table. MS Word allows you to add title text and description text. However, when converting the file to a PDF the description text is not always transferred. Best practice is to enter both but double-check the summary field in PDF.

1. Place the cursor in the table and **Left-Click** to highlight.
2. **Right-Click > Table Properties**… from the pop-up menu.
3. The **Table Properties** dialog box has five tabs – Table, Row, Column, Cell, Alt text – click the **Alt text** tab. Enter the table summary in the **Description** field and click **OK**.

Figure 27–Insert Alt text to Table
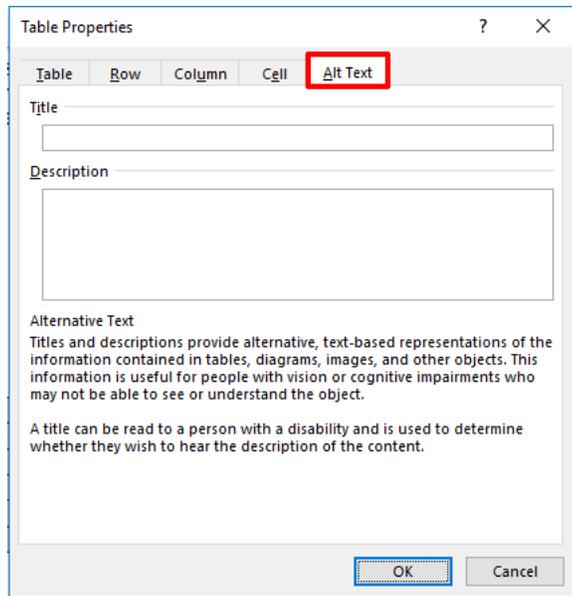
See the Microsoft website on adding Alt text to tables and other objects in MS Word 2016 at: https://office.microsoft.com/en-us/powerpoint-help/add-alternative-text-to-a-shape-picture-chart-table-smartart-graphic-or-other-object-HA010354748.aspx?CTT=1#BM14.

Things You Should Not Do
- Do not create your table using the **Draw Table** tool, which is available only with the **Table Tools** on the **Insert** ribbon.
- Do not create page layouts with tables.
- Do not merge cells, and do not split cells.
- Do not control spacing in your table with blank rows or columns. Adjust line spacing instead.

Providing Unique Hyperlink Labels

One of the features of screen readers is that they can allow the user to hear just the hyperlinks on a page. This aids in navigation since the user does not have to hear the entire page in order to locate the links.

There are **many** varying opinions on how to display them. Some URLs are *very* long. These can quickly clutter up a document with ugly strings of letters, backslashes, dots, and other characters. So, what's the answer? First, always make sure the URL is identified. Don't just type "Click Here," with the link hidden.

The problem with typing just the words like "Go to NWCG" or "Click Here," is that assistive technology won't identify the actual web address, and if the document is printed, it won't identify the web address either.

- For a document with just one or two web addresses, go ahead, and type the whole address.
- For documents with more than two web addresses or just really ugly, long strings, you can type the landing page web address, such as https://www.nwcg.gov, and in the Hyperlink Context Box put in the full address that will show in Alt text as well. At the bottom, in the footer, or at the back of the document you can place the complete string for printing purposes. This keeps your document much cleaner, accessible, and the actual address is printable.

To Create A Hyperlink:

1. Type the URL. It automatically creates the link, but you'll want to adjust the text.
2. Click on the hyperlink text and go to the **Insert Tab** on the ribbon bar and under **Links** click on the **Hyperlink** button.
3. The **Text to Display** box displays what seen on the page.
4. In the **Address Box,** make sure the full address with the https:// is included.
5. On the top right of this window is a button called **Screen Tip**. Click on it.
6. This is the Alt text that the assistive technology will read and should say something like: "This link goes to …. at:" and place the complete web address here as well. You can copy and paste from the address window. Click **OK** to leave both of these windows.

You will now see the URL in blue with an underline indicating it is a link. If you hover over the link, it will show the Screen Tip text with the complete address. Then remember to place the full URL address in the footer or at the back of your document for a printable version, if necessary.

The following table provides some poor examples contrasted with some good examples of proper hyperlinks.

Table 1.1 4–Hyperlinks

Poor Examples	Problem	Good Example
Google search engine, click here *Ask* search engine, click here *Dog Pile* search engine, click here	The link titles are not unique.	Search Engines to use: *Google.com* *Ask.com* *DogPile.com*
NWCG provides consistent and uniform guidance to the National Wildfire Coordinating Group (NWCG) organization… More information on the fire website at NWCG.	When materials are printed on a photocopier, the URL cannot be followed if its full string is not visible.	NWCG provides consistent and uniform guidance to the NWCG organization… More information is available at: https://www.nwcg.gov.
Link 1 http://www.fs.fed.us/fire/equipment/index.html	Link titles are not descriptive of the	NWCG Mission Statement at: https://www.nwcg.govhttp://www.fs.fed.us/fire/aviation/

Poor Examples	Problem	Good Example
http://www.fs.fed.us/fire/aviation/	underlying content.	

Forms

According to Accessibility Guidelines, when electronic forms are designed to be completed online, the form 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.

Form layouts are typically created in MS Word first, then often saved as a PDF, but to be accessible, they must have tooltips associated with a field. Tooltips can be created within the originating document or can be added to the completed PDF.

*Note: MS Word document form fields **will not** transfer to PDF. Form fields must be set in Adobe Acrobat for fillable PDF forms. See PDF Checking and **Problem Solving > Forms** for how to fine-tune your Acrobat PDF Fillable Form.*

From MS Word, first make sure the **Developer Options** is turned on by selecting **File > Options > Customize the Ribbon**. In the right-hand column drop-down titled **Main Tabs,** check the box next to **Developer**. Click **OK**.

Open the form in MS Word as you normally would.

1. Highlight the field you want to use as a form field.
2. Select the **Rich Text Content Control** button. A properly tagged field will be added to the document. Repeat the process for each remaining field.

From Adobe Acrobat, first save the MS Word document as a PDF.

1. Open the PDF in Adobe Acrobat.
2. Choose **Tools > Forms > Create.**
3. Choose **Create from Existing Document**.
4. Select each fillable box and **Right-Click Properties** and add **Title** and **Tooltip**. The Tooltip should match the **Title**.

Saving as a Template and Create Editable Regions

Templates save time, especially if you have repetitious documents that need to maintain a standard look regardless of who prepares them. There's no need to reinvent the wheel every time.

1. Save the document as a template first.
2. Go to the **File** > **Save As**, choose **MS Word Template** in the drop-down and select the folder location where you want to store your documents. Think about creating a template folder. We also suggest adding the MS Word Template to the end of your document name and keep an original separate, especially if you will be adding a password to protect the template document from being edited. If you lose the password, you will not be able to open the document. We suggest you keep your original unlocked.
3. If you think some people are still working in older versions of MS Word, you can save it as an MS Word 97-2003 Template.

That is how to save a basic template. However, you may want to add content controls or restrict editing of certain areas. All these can be found on the Developer Tab on the ribbon bar.

1. Go to the **Developer Tab** on the ribbon bar. If you don't see the **Developer Tab**, go to the **File > Options > Customize Ribbon,** check the developer box on the right panel, and click **OK.**
2. The **Controls Group** has several options.
   a. The colored double Aa is Rich Text.
   b. The plain double Aa is Plain Text. Next to that is the Picture Content control.
   c. There's a Building Block.
   d. A Combo Box.
   e. A Drop-down Menu.
   f. A Date Picker.
   g. A Checkbox.
   h. A group of legacy tools if you are editing an older document that used controls.
   i. A Design Mode.
   j. A Properties option.
   k. A Group option.
3. Select the text or images you want to protect or you can add a text control box.
4. Now on the **Developer Tab** in the **Controls Group** select the colored double Aa to add a Rich Text Control. This places a text box on your document, these don't appear to cause accessibility errors. If you want to add instructions on how to fill out the content of the text box, select the text box, and in the **Control Group** on the ribbon bar select **Design Mode**. You should now see new chevron boxes on each side of the text inside the text box. Highlight the current text and replace it with whatever you want to say. Now click the **Design Mode** button to un-highlight.
5. If you want the placeholder text to disappear when the user types, click inside the text box, and on the ribbon bar in the **Control Group** select the **Properties Remove > content control when contents are edited**, and click **OK**.
6. To restrict editing to only the areas you want users to be able to change, go to the **Developer Tab** on the **ribbon bar**, and under the **Protect** group select **Restrict Editing**, which opens a new panel on the right side of the window. By holding the control key down, we can select individual areas from anywhere on the page.
7. On the right side of the screen Under **Step 2** in the restrict formatting panel, put a check in the **Allow only this type of editing in the document**, then choose **No changes (read only)** in the drop-down. Now, under the exceptions, put a check in the box next to **Everyone**. In **step 3, say yes**, **start enforcing protection, and** add a password.
8. If you click anywhere on the screen to unselect items, you'll see the editable areas are highlighted in yellow. Editable regions can be anything on the page: headings, body text, tables, images, etc.
9. Go to **File > Save As**, make sure it is an **MS Word Template** format, and make sure you add the **MS Word Template** to the end of the file name.

You now have a document you can share with others with confidence that it will only be edited in the areas you have specified. Remember though, if you are sending PDFs that you need assistance with making it accessible you must provide us with the password. We can't do anything with locked documents.

Is Your Document Accessible?

MS Word has a feature that checks to see if your document has been formatted properly for accessible. However, it's a good idea to use the **MS Word Accessibility Checklist** at the end of this chapter to double-check your document against the list and fix those items you may have missed before running the following checks.

Check Your Document for Accessibility:
1. Click on **File**.
2. In the middle column under **Info** click on **Check for Issues** icon.
3. Click on **Check for Accessibility.**
4. A screen will appear on the right side of the screen.
5. This will list your Inspection results for the document you have created.
6. If there are errors, click on each error and see what you need to do to correct the error.

Figure 28–Accessibility Checker
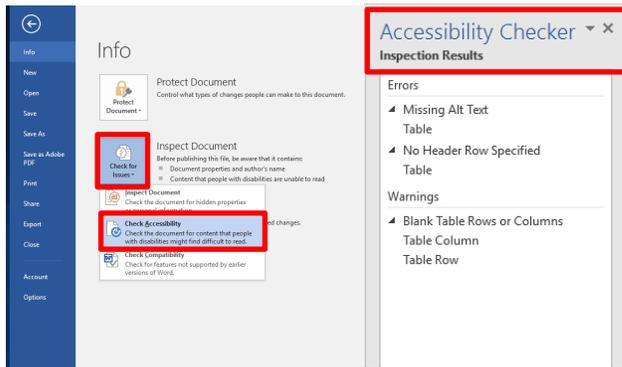
Additional Information

The following link offers full directions on making your MS Word accessible: Creating Accessible documents using MS Word, http://office.microsoft.com/en-us/word-help/creating-accessible-word-documents-HA101999993.aspx.

MS Word Accessibility Checklist

ID	Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and does it make the contents of the file clear?			
1.3	Have the Document Properties for Title, Author, Subject, Keywords, Language, and Copyright Status been applied?			
1.4	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.5	Have track changes been accepted or rejected and turned off?			
1.6	Have comments been removed and formatting marks been turned off?			
1.7	Is the document free of background images or watermarks?			

ID	Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.8	Do all images, grouped images, and non-text elements that convey information have meaningful Alt text descriptions?			
1.9	Do complex images (i.e., charts and graphs) have descriptive text near the image (perhaps as a caption)?			
1.10	Are all URLs spelled out and linked to correct web destinations?			
1.11	Are email links accessible?			
1.12	Has a separate accessible version of the document been provided when there is no other way to make the content accessible?			
1.13	If there are tables, are blank cells avoided?			
1.14	Is all of the text easy to read in comparison to the background of the document (i.e., has a color contrast ratio of 4.5:1)?			
1.15	Has the document been reviewed in Print Preview for a final visual check?			

ID	General Layout and Formatting Requirements	Yes (Pass)	No (Fail)	N/A
2.1	Has the document been formatted using Style elements (Heading 1, Heading 2) and/or Outline hierarchically (Heading 1 to Heading 2 to Body Text)?			
2.2	Are page numbering codes used as opposed to manually typed page numbers?			
2.3	If footnotes are present, have they been created through MS Word Footnote linking?			
2.4	If color is used to emphasize the importance of selected text, is an alternate method also used?			
2.5	Is the list style being used as opposed to manually typed characters (i.e., hyphens, numbers, or graphics)?			
2.6	Is the document free of text boxes?			
2.7	If the document contains a TOC, was it created using the TOC field (created using the TOC Command in MS Word)?			
2.8	Does the document avoid using underscores (using the space bar or tab feature) to create lines?			

ID	Document Image Requirements	Yes (Pass)	No (Fail)	N/A
3.1	Are images set to **Wrap In Line with Text** flush left?			
3.2	Are multiple associated images on the same page (i.e., boxes in an organizational chart) grouped as one object?			
3.3	Have all multilayered objects been flattened into one image and does that image use one Alt text description for the image?			
3.4	Do images/graphics appear crisp and legible?			

ID	Document Table Requirements	Yes (Pass)	No (Fail)	N/A
4.1	If the document has a tabular appearance, is that tabular structure made using the table option (as opposed to manual tabs and/or spaces)?			
4.2	Do all tables have a logical reading order from left to right, top to bottom?			
4.3	Do data tables have the entire first row designated as a Header Row in Table Properties?			
4.4	Is the table free of merged cells?			
4.5	Are all tables described and labeled where appropriate?			
4.6	In Table Properties, is Allow row to break across pages unchecked?			

PDF File Creation in MS Word

Converting Your Documents to Accessible PDF Files

You should have Adobe Acrobat X or XI Pro software installed to continue making an accessible PDF file.

Now that the document has a structure, Alt text for images, formatted columns, and correctly styled tables, it is ready to be converted to the PDF file format. These general steps will help get the document to an accessible PDF.

1. Click on **Review** tab on the menu bar.
2. Turn **Track Changes Off**: If Track Changes is on, click the **Track Changes Icon** under the **Review** tab. It should not be highlighted.
3. Under **Show Markup**, turn off **Comments**.

Note: Always perform this step. Comments may be hidden.

4. Under Show markup: turn off formatting.
5. Go to **File > Options > Display** and turn off all formatting marks.

You Are Now Ready to Convert Your Document to a PDF File.
There are a few ways to save a PDF. Each handles the file a little differently and while one may resolve an error, the other two methods may make it worse. If that happens then try the alternate method. It won't hurt and may save you a lot of time.

Method One:

1. With the document open in MS Word select the **Acrobat tab** on the **ribbon bar**.
2. Click the **Create PDF Icon**.
3. The PDF will automatically open.

Figure 29–Acrobat and Create PDF icons on the MS Word toolbar
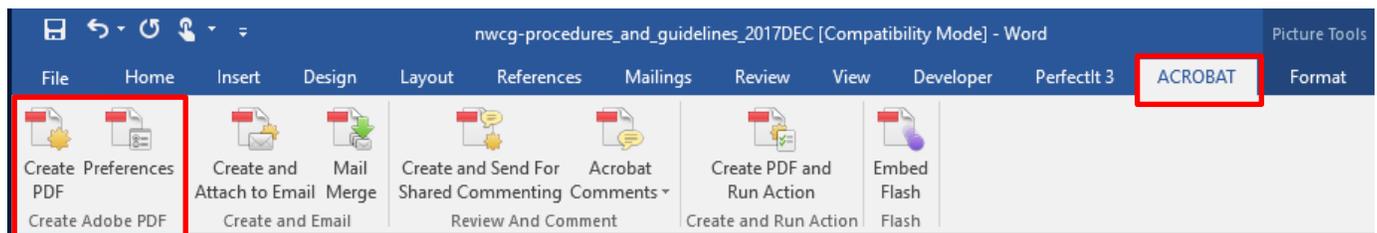
Method Two:

1. Go to **File > Save As** Adobe PDF.
2. Save to a folder and open your PDF to run the Accessibility Checker.

Method Three:

1. Go to **File > Save As.**
2. In the **Save As Type** choose **Adobe PDF**.
3. Save to a folder and open your PDF to run the Accessibility Checker.

In ALL cases, make sure the Protect Document is **UNCHECKED**. We cannot fix a protected PDF.

Go to PDF Checking and Problem Solving and learn how to check your PDF for accessibility, and correct any errors the document may have.

Excel Document Creation

Preparation of Accessible Documents

Set Document Language
At this time, it is not possible to indicate the natural language of selected cells within an Excel 2016 workbook. For assistive technologies (e.g., screen readers) to present a document accurately, it is important to indicate the language of the document.

To Change the Default Language for a Workbook:

1. Go to **File > Options** in the list in the left windowpane**.**
2. Select **Language** from the list on the left of the **Options** dialog.
3. Under **Choose Editing Languages**, 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***.

4. Select **Set as Default.**

Close all MS Office 2016 programs and open them again for the changes to take effect.

Provide Text Alternatives 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 Alt text to each image. If an image is too complicated to concisely describe in the Alt text alone (artwork, flowcharts, etc.), provide a short text alternative and a longer description as well.

Tips for Writing Alt Text

- Try to answer the question "what information is the image conveying?"
- Alternative text should be fairly short, usually a sentence, or less, and rarely more than two sentences.
- If more description is required (for a chart or graph), provide a short description in the Alt text (a summary of the trend) and more detail in the long description, see below.

Tips for Writing Longer Description

- Long descriptions should be used when text alternatives (see above) are insufficient to answer the question "what information is the image conveying?"
- In some situations, the information being conveyed will be how an image looks (e.g., an artwork, architectural detail). In these cases, try to describe the image without making too many assumptions.
- One approach is to imagine you are describing the image to a person over the phone.
- Ensure that you still provide concise Alt text to help readers decide if they are interested in the longer description.

To Add Alt text to Images and Graphical Objects:

1. **Right-Click** the object.
2. Select **Format Picture…**
3. Select the **Alt text** option from the list.
4. Fill in the **Title**. If more description is required (for a chart or graph), provide a short description in the **Title** (a summary of the trend) and more detail in the **Description**.

Format Your Cells

As you begin adding content, your spreadsheet will require structuring to bring meaning to the data, make it easier to navigate, and help assistive technologies read it accurately. One of the easiest ways to do this is to ensure that you properly format the cells.

Named Styles

You should make use of the named styles that are included with the MS Office application (Heading, Result, etc.) before creating your styles or using the character formatting tools directly. Named styles help your readers understand why something was formatted in a given way, which is especially helpful when there are multiple reasons for the same formatting (e.g., it is common to use italics for emphasis, Latin terms, and species names).

Note: While MS Office application suites support headings in much the same way, the named styles often differ.

Formatting header and result cells brings order to the spreadsheet and makes it easier for users to navigate effectively. For example, you can format header rows and columns using heading styles to apply bolded, enlarged, and italicized text (among other characteristics). You may also want to format cells containing results of calculations to appear bold and underlined to help distinguish them from the rest of your data.

To Format a Cell With Default Named Styles

1. Highlight the cells that you want to format.

Note: To apply a style to an entire row or column, select the row, or column indicator, and follow the next steps.

2. Go to menu **Home > Styles > Cell Styles.**
3. Select the desired formatting style from the drop-down menu.

*Note: To modify a style, **Right-Click** the desired formatting style from the drop-down menu and select **Modify**. Changes made to the style will affect all instances of the style within your workbook.*

Other Cell Characteristics

Ensure your cells are formatted to properly represent your data, including number, and text attributes.

To Format Cell Characteristics:

1. Highlight the cells that you want to format.
2. Go to menu **Home.**
3. In the relevant sections (**Numbers**, **Font**, etc.) make your adjustments.

Note: When formatting your spreadsheet, avoid merging cells. At times, it may seem easier to present your data by merging cells, but this can make it more difficult for users of assistive technologies and people navigating your spreadsheet using the keyboard.

Define Cell Names

Naming the different data ranges within your spreadsheet makes it easier to navigate through the document and find specific information. By associating a meaningful name to a data range, you will enhance the readability of your document. These named ranges can be referenced in multiple locations of your document and within calculations and equations.

To Define a Name
1. Highlight the cells you would like to name.
2. Go to menu **Formulas.**
3. Then **Defined Names > Define Name** button.
4. In the **Name** text box, enter the name for the data range.
5. In the **Scope** drop-down list, select **Scope** within which the name can be referenced.
6. Select **OK.**

Create Accessible Charts

Charts can be used to make data more understandable for some audiences. However, it is important to ensure the chart is as accessible as possible to all members of your audience. All basic accessibility considerations that are applied to the rest of your document must also be applied to your charts and the elements within your charts. For example, use shape, and color, rather than color alone, to convey information. Additional steps should be taken to ensure that the chart contents are appropriately labeled to provide reference points to correctly interpret the information.

To Create a Chart:
1. Select the data that you want to include in the chart.
2. Go to menu **Insert.**
3. In the **Charts** section, select the icon of the type of chart you would like to insert.
4. Select a **Chart Type** from the **Chart Gallery** in the drop-down menu.

To Add Titles and Labels:
1. In the **Chart Tools** menu section, go to menu **Layout.**
2. In the **Labels** section, select the type of title or label you would like to define (e.g., **Chart Title, Axis Titles, Data Labels.**)

Note: It is a good idea to use as many of the titles and labels available in this section as possible.

To Apply a Predefined Chart Layout:
1. In the **Chart Tools** menu section, go to menu **Design.**
2. In the **Chart Layouts** section, select a **Quick Layout** from the scrolling **Chart Layouts** gallery.

To Change to a Different Predefined Chart Type:
1. In the **Chart Tools** menu section, go to menu **Design.**
2. In the **Type** section, select the **Change Chart Type** icon.
3. In the **Change Chart Type** dialog, select a **Chart Type** from the left pane.
4. Select a **Chart Design** from the right pane.
5. Select **OK.**

To Apply Alt text to a Chart:
1. **Right-Click** the chart.

*Note: Make sure you are **Right-Clicking** the whole chart, not just an element within the chart. It is possible to add descriptions to the many elements that make up a chart, but this is not recommended.*

2. In the **Format Chart Area** dialog, select **Alt text.**
3. Enter a **title** in the **Title** box.
4. Enter a longer description of the chart contents in the **Description** box.
5. Select **Close.**

Other Chart Considerations
- When creating line charts, use the formatting options to create different types of dotted lines to facilitate legibility for users who are color blind.
- Change the default colors to a color safe or grayscale palette.
- Use the formatting options to change predefined colors, ensuring that they align with sufficient contrast requirements.

Use Other Content Structuring Features
While cell formatting is the most common method of structuring documents, other content structuring features should be used where appropriate:

1. **Document Title**.
2. Insert a descriptive and meaningful title.
3. To change the title of the current document.
   a. Go to menu **File.**
   b. Select **Info** from the list in the left windowpane.
   c. In the right windowpane, select the **Title** text box.
   d. Enter the **Title.**

*Note: The **Title** defined in the properties is different than the file name. It is also unrelated to the template name, as discussed above.*

Avoid Floating Elements
Avoid floating elements (other than charts) such as floating images, objects, tables, or text boxes. Similarly, avoid placing drawing objects directly into the document (such as borders to create a diagram). Instead, create borders with page layout tools and insert complete graphical objects.

Format of Text
When formatting text, especially when the text is likely to be printed, try to make content easier to see:

Use font sizes between 12 and 18 points for cell contents.

Use fonts of normal weight, rather than bold, or light weight fonts. If you do choose to use bold fonts for emphasis, use them sparingly.

Use standard fonts with clear spacing and easily recognized upper and lower case characters. Sans 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, italics, or underlined.

Use normal or expanded character spacing, rather than condensed spacing.

Avoid animated or scrolling text.

To Change the Text Size for a Default Named Style:

1. Go to menu item **Home.**
2. In the **Styles > Cell Styles** icon.
3. Select the style to modify from the list.
4. **Right-Click** and select **Modify…**
5. In the **Style** dialog, select the **Format** button.
6. In the **Format Cells** dialog, select the **Font** tab.
7. In the **Size** text box, type the desired size, or select it from the list.
8. Select **OK.**

Use Sufficient Contrast

The visual presentation of text and images of text should have a contrast ratio of at least 4.5:1. To help you determine the contrast, here are some examples on a white background:

Very good contrast (Foreground=black, Background=white, Ratio=21:1)

Acceptable contrast (Foreground=#767676, Background=white, Ratio=4.54:1)

Unacceptable contrast (Foreground=#AAAAAA, Background=white, Ratio=2.32:1)

Also, always use a single solid color for a text background rather than a pattern.

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. To spot where color might be the only visual means of conveying information, you can create a screenshot of the document and then view it with online grayscale converting tools.

Navigational Instructions

Provide a general description of the spreadsheet contents and instructions on how to navigate the data effectively. The best way to do this is to make a cell at the beginning of the data (e.g., A1) with this information. It will be the first cell accessed by assistive technologies. If you are using this cell for a label or data, you can attach a comment note to the cell containing navigational instructions.

Accessibility Checker

Use the Accessibility Checker to fix and revise your document.

1. Go to menu **File.**
2. Select **Info** in the left windowpane.
3. To view and repair the issues, select **Check for Issues**, and then **Check Accessibility.**
4. The **Accessibility Checker** task pane will open, showing the Inspection results.
5. Select a specific issue to see **Additional Information.**

To Evaluate PDF Accessibility in Adobe Acrobat Professional:

1. Go to menu **Advanced > Accessibility > Full Check…**
2. In the **Full Check** dialog, select all the **Checking Options**.
3. Select the **Start Checking** button.

More information can be found at Microsoft Help for Creating Accessible Excel Workbooks: http://office.microsoft.com/en-us/excel-help/creating-accessible-excel-workbooks-HA102013545.aspx?CTT=5&origin=HA102671874.

> *Note: **Remember use the accessibility checklist to be certain you have followed all steps necessary to make your PDF document accessible.***

Excel Accessibility Checklist

ID	Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and does it make the contents of the file clear?			
1.3	Have the Document Properties for Title, Author, Subject, Keywords, Language, and Copyright Status been applied?			
1.4	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.5	Have track changes been accepted or rejected and turned off?			
1.6	Have comments been removed and formatting marks been turned off?			
1.7	Is the document free of background images or watermarks?			
1.8	Do all images, grouped images, and non-text elements that convey information have meaningful Alt text descriptions?			
1.9	Do complex images (i.e., charts and graphs) have descriptive text near the image (perhaps as a caption)?			
1.10	Are all URLs linked to correct web destinations?			
1.11	Are email links accessible?			
1.12	Has a separate accessible version of the document been provided when there is no other way to make the content accessible?			
1.13	If there are tables, are blank cells avoided?			
1.14	Is all of the text easy to read in comparison to the background of the document (i.e., has a color contrast ratio of 4.5:1)?			
1.15	Has the document been reviewed in Print Preview for a final visual check?			

ID	General Layout and Formatting Requirements	Yes (Pass)	No (Fail)	N/A
2.1	Is the table free of merged cells?			
2.2	Do the active worksheets have clear and concise names that allow users and assistive technology to identify the table's source and content?			
2.3	Is each table prefixed (titled) with the table name and table number?			
2.4	Does the table header repeat at the top of the table as it goes from one page to another?			
2.5	If color is used to emphasize important text, is there is an alternate, accessible method used as well?			
2.6	Have all extraneous comments been removed?			
2.7	Is the document free of text boxes?			

ID	Charts/Image Requirements	Yes (Pass)	No (Fail)	N/A
3.1	Are associated images on the same page, such as boxes in an organizational chart, grouped as one object?			
3.2	Have all multilayered objects been flattened into one image?			
3.3	Do all non-text elements that convey information–including images–have descriptive captions? Or Alt text does not currently work when a PDF is made from Excel?			
3.4	Do all charts have titles, legends, and axis labels?			

Multimedia Creation

If you create podcasts and other sound files, videos, and multimedia presentations, software to play videos, audio, or multimedia for your website, visit the https://digital.gov/resources/ for step-by-step directions on making these files accessible.

Creating Web Video Text Tracks (WebVTT)

WebVTT files provide captions or subtitles for video content, and also text video descriptions, chapters for content navigation, and more generally any form of metadata that is time-aligned with audio or video content.

1. Include WebVTT at the top of the file.
2. Use the following format to mark time in a WebVTT file.
   a. 00:00:03.3, (hour: minute: second: microsecond)
   b. 00:00:03.3 --> 00:00:20.1
3. Break the text into no more than three lines per timestamp, to make sure they can fit within the captioning.

Below Is an Example of a VTT File.

Figure 30–Example of a WebVTT file

Note: Remember to follow the Accessibility Checklist to be certain you have followed all steps necessary to make your PDF document accessible.

Multimedia Accessibility Checklist

ID	Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and makes the contents of the file clear in the context in which it is presented?			
1.3	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.4	Does the document refrain from using flashing/flickering text and/or animated text?			
1.5	Are all URLs linked to correct web destinations?			
1.6	Are email links accessible?			
1.7	Has a separate accessible version of the multimedia file been provided when there is no other way to make the content accessible?			

ID	Secondary Sensory-Channel Requirements	Yes (Pass)	No (Fail)	N/A
2.1	If a video—Does the video or animation contain synchronized captioning?			
2.2	If an animation—Does the animation have a text equivalent?			
2.3	If a sound file—Does the sound file have a matching transcript file?			

ID	Functional Control Requirements	Yes (Pass)	No (Fail)	N/A
3.1	Does the file have the minimum required media controls of video resizing, volume control, play/stop buttons, and the ability to turn captions on and off?			
3.2	Are all media controls keyboard accessible?			
3.3	Is the media 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?			

PowerPoint Creation

Preparing Accessible Presentations

Properties

Populating certain Document Properties (Author, Title, Subject, and Keywords) and setting the language are required to make an electronic file accessible.

To Specify Properties:
1. Click on **File** in the upper left corner.
2. New field will appear on the right.
3. Choose **Properties.**
4. Choose **Advanced Properties** and then the **Summary** screen will appear.

Figure 31–Document Properties Window
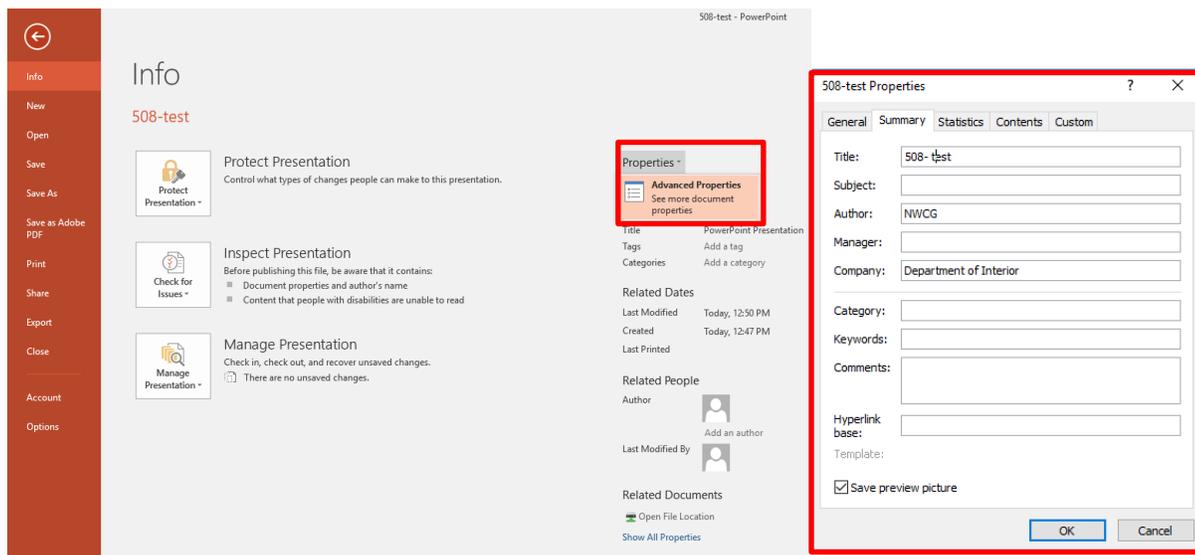
Enter the title of the document, subject, and author (do not use your name; rather, use NWCG) and keywords. The other fields are optional.

Set Document Language

For assistive technologies (e.g., screen readers) to be able to present your document accurately, it is important to indicate the natural language of the document. If a different natural language is used for a paragraph or selected text, this also needs to be indicated.

To Change the Default Language:
1. Go to **File menu.**
2. Select **Options** from the list in the left windowpane.
3. Select **Language** from the list on the left of the **Options** dialog.
4. Under **Choose Editing Languages**, select the editing language you want to use.
5. Select **Set as Default.**
6. Close all MS Office 2016 programs and open them again for the changes to take effect.

*Note: To add an editing language, select the language from the drop-down list labeled **Add additional editing languages.***

To Apply a Language Directly to Selected Text
1. Select the text.
2. Go to **Review menu.**
3. In the **Language** section, select the **Language** button.
4. Select **Set Proofing Language.**
5. In the **Mark selected text as** box, select the language from the list.
6. Select **OK.**

To Set the Language
1. Access the **Properties** menu (see above).
2. Choose **Advance Properties.**
   a. Choose the **Custom** tab.
   b. You will notice a blank to the right of Name. Select **Language** from the list.
   c. Type is **Text**.
   d. Type in Value–**English**.
   e. Click Add then **OK**.

Figure 32–Set Language Window
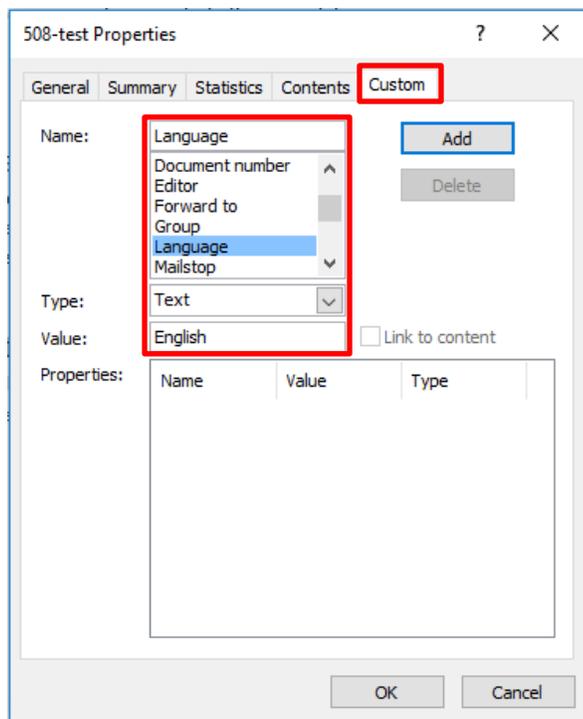
Create a New Presentation
1. Click **Home > New Slide.**
2. Select **Layout**.

*Note: Always use the **Layouts** menu or the themes in the **New Slide** menu to select a layout.*

Use Layouts to make sure that the Screen Reader follows along with the slides correctly.

Add a title to a slide. This is equivalent to a heading one tag in word.

Figure 33–Insert New Slide
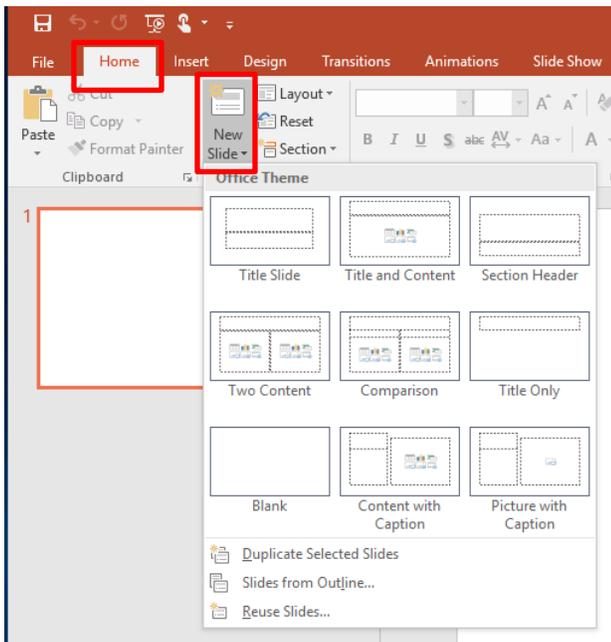
Create Accessible Templates

Areas of a PowerPoint–Default View

The major elements of a normal default view include:

1. Slide and Outline area on the left.
2. Content stage area in the center and right.
3. Notes Pane area below the content stage area.
4. View button below Notes Pane for Normal, Slide Sorter, or Slide Show view.

Figure 34–Fields of a PowerPoint Screen

Slide Text Must Be Viewable in Outline View

It is critical to create slides via the **Master Slide** group. Do not use text boxes from the ribbon bar or drop graphics on a slide without using placeholders.

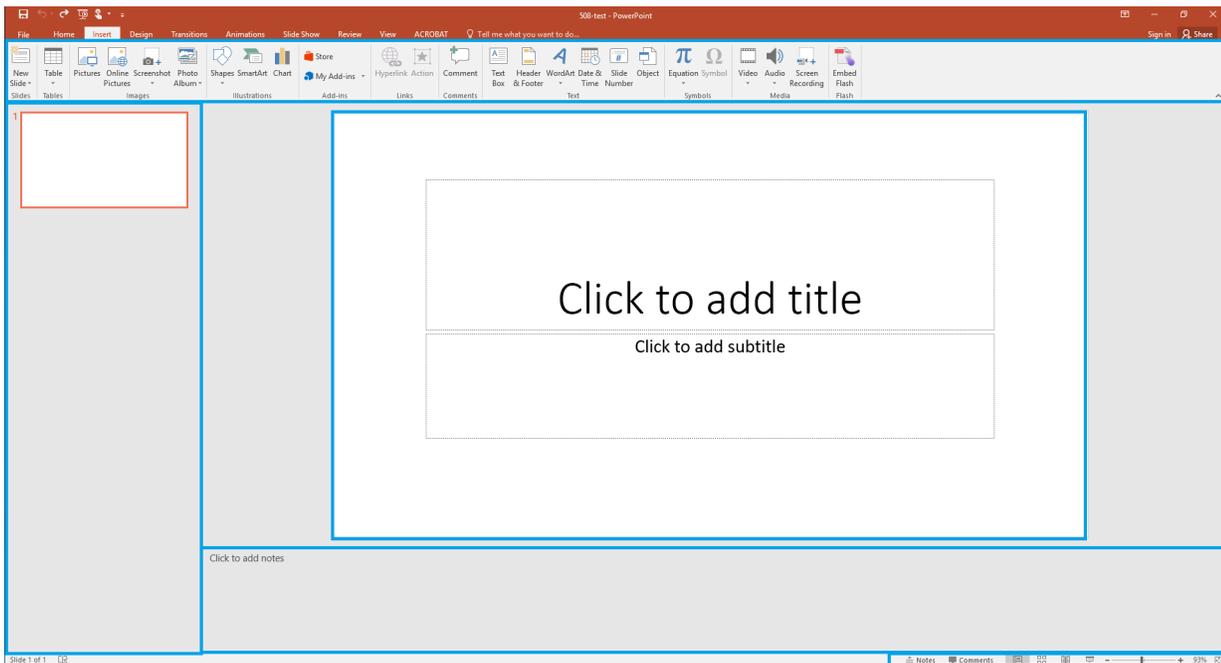A PowerPoint document will not be accessible if you place images, graphics, or text on a slide without using PowerPoint's content placeholders. Content placeholders can only be added via the Master Slide window. All text must appear in the outline view of a presentation.

- Click the **Outline** tab in the Slide and Outline area to display the outline pane. Only text displayed on the outline pane will be read by a text-to-speech reader.
  - Ensure each slide has a slide title. The slide title serves as the structure in navigating and understanding the logical flow of the slide presentation.
- The Outline is viewable when you are in Normal view.
- To switch between slide view and outline view, click the tabs at the top left navigation window.

Note: *Text added to the **Notes** Pane of a slide will not appear in the outline and will not be accessible by assistive technology.*

Slide Layouts

PowerPoint is designed to encourage the use of slide layouts, especially in newer versions. Using these templates correctly will ensure that your files have correctly-structured headings and lists, proper reading order, etc. The correct use of slide layouts is probably the most significant thing you can do to ensure that your content is accessible.

For each slide you create, select a layout with as many placeholders as you will need for that slide. If the template doesn't have an option with enough placeholders, create an additional layout option that does (**View > Slide Master > Insert Layout > Insert Placeholder**).

Plan ahead to your most complex slide. Extra placeholders can easily be moved, resized, removed, or ignored, slide by slide, but if you don't have enough, you'll need to create another **New Slide** master layout option.

Select **Home > New Slide**, or select the **New Slide** button, and a menu of slide types will appear.

Figure 35–New Slide Menu
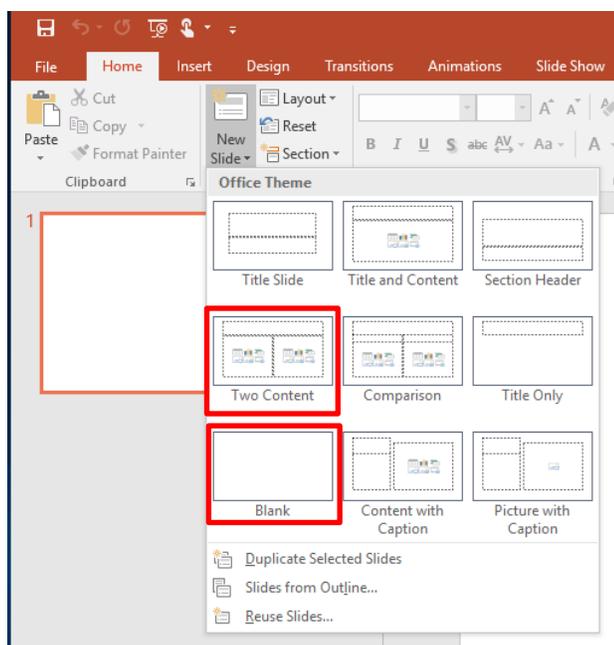
Adding New Layouts and Placeholders
1. Select **View > Slide Master**.
2. Select **Insert Layout**.
3. Click on **Insert Placeholder** to select type (repeat as needed). You can drag them off the page and out of the way until you need them or delete them later.
4. Close Slide Master by going to the View tab and selecting Normal.
5. From the Home tab use the **New Slide** button to create a new slide using one of the master templates found there.

Use Built-In Layout and Styling Features
PowerPoint 2016 does not offer True Headings or Named Styles as MS Word 2016 does.

Use Built-In Slide Layouts
Instead of creating each slide in your presentation by starting from a blank slide, check whether there is a suitable built-in layout.

> *Note: The built-in layouts can be more accessible to users of assistive technologies because they sometimes read the floating items on the slide in the order that they were placed on the slide. The built-in layouts have usually taken this into account (e.g., "Title" first followed by other items, left to right, and from top to bottom). If you create slide layouts from scratch, it is sometimes difficult to keep track of the order in which elements were placed.*

Customize Using Master Slides
If a layout must be customized, it is recommended that Master Slides be used. Every slide layout in a presentation is defined by its Master Slide. A Master Slide determines the formatting style for various elements of the slide layout. This includes font styles, character formatting, and the positioning of elements. Essentially, each Master Slide acts as a design template for the slide layout.

If you edit any aspect of the slide layout in the Master Slide, the change will affect all slides that were created based on it. For this reason, it is good practice to edit the Master Slide and use the slide layouts before building individual slides. It is essential you create and use Master Slides that meet the accessibility requirements.

Columns of Text
If you put two or more columns of text on a page, use a standard layout that has two side-by-side text box placeholders. Never use the Tab key to separate lists of text into columns within a single text box. By using text box placeholders, a Screen Reader will read the entire first text box and then move to the next text box in the slide's reading order. This will make much more sense to the listener.

Figure 36–Using Columns for Text
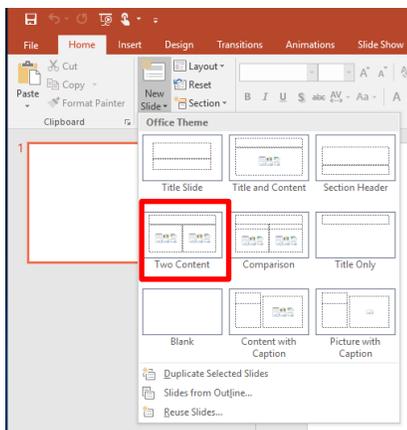
To Create or Customize a Master Slide

1. Go to menu item: **View.**
2. In the **Master Views** section, select the **Slide Master** icon.
3. View **Slide Master** with its associated layouts.
   Note: If you have the Normal view open, the Slide Master is the larger slide image in the slide thumbnail pane. The associated layouts are positioned beneath the Slide Master.
4. Customize the existing Master Slide and its associated layouts to suit your needs (e.g., apply a design, theme-based colors, fonts, effects, backgrounds) ensuring that your changes meet accessibility requirements.
5. Go to menu item: **File > Save As.**
6. In the **File Name** box, type a file name.
7. In the **Save As Type** list, select **PowerPoint template.**
8. Select **Save.**

Slide Design

Use the built-in designs offered in PowerPoint; however, be aware that not all of these design options have 'accessible' color contrast or other design elements. Please ensure that whatever design is chosen meets all the design considerations discussed in this section.

To access these design choices, go to the **Design** tab, and scroll through the options. The number of choices may be expanded by using the drop-down menu highlighted below. From the **Design** tab menu, color selection, and font choices can also be controlled.

Figure 37–Slide Design Tab
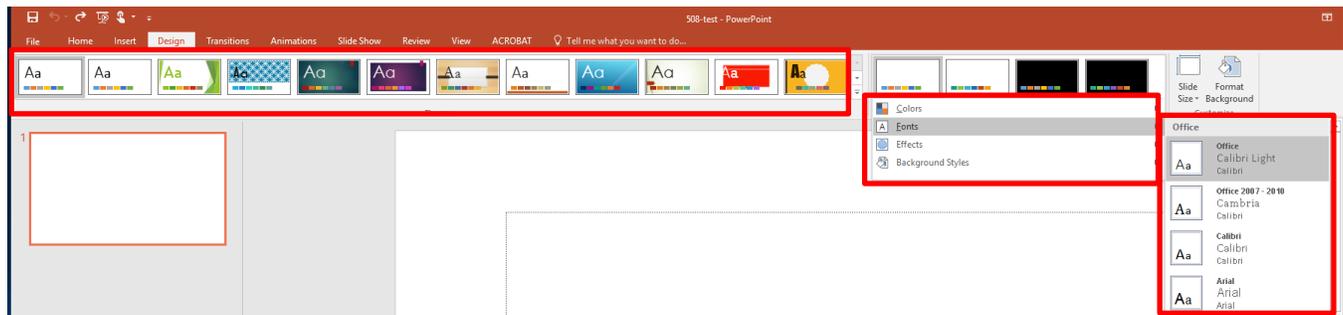
Font Size and Type

Since a PowerPoint presentation is usually projected onto a large screen consider how far the audience will be from the screen and choose a font size accordingly. The minimum recommended font size for a PowerPoint presentation is 24 points. Select Sans Serif fonts that are easy to read such as Arial or Verdana.

Increase Visibility for Colorblind Viewers

Color blindness affects a significant number of people, most often as an inability to distinguish between red and green, or seeing red, and green differently. When creating presentations, it's important to choose elements that increase visual contrast so viewers who cannot rely on color distinction can still understand what they're seeing. Some things you can do when building a slide deck include:

- Avoid using orange, red, and green in your template and text.
- Use texture in graphs, instead of color alone, to highlight points of interest.
- Circle or use animation to highlight information, rather than relying on laser pointers or color.
- Keep the overall contrast in your presentation high.

Use of Color and Contrast

Make sure your text color provides enough contrast with the background color that people can easily read it.

- Always put text on a plain, solid-colored background. Text placed on top of an image or patterned background is harder to see.
- Provide enough contrast between the text color and the background color.

Slide Titles

Ensure that all slides have unique titles. Slide titles are used for navigation and selection by people who are not able to view the slide.

To Add Visible Titles to Your Slides

Select **Home > Slides > Reset** to restore slide placeholders for the selected slide.

1. Type a unique name in the **Title** text box.
2. If you do not want the title to be visible on your slide, do the following:
   a. On the Home tab, in the Drawing group, click the Arrange menu.
   b. Click Selection Pane.
   c. Click the eye icon next to the text box to toggle its visibility.

Figure 38–Reset Slide
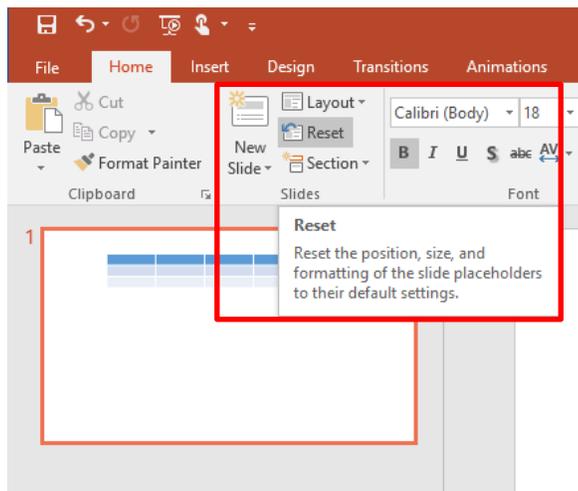
Hyperlink Text

Hyperlink text should provide a clear description of the link destination, rather than only providing the URL. To add a hyperlink to your document, do the following:

1. Place your cursor where you want the hyperlink.
2. On the **Insert** Tab, in the **Links** group, click **Hyperlink** to open the **Hyperlink** dialog box.
3. In the **Text to Display** box, type in the name, or phrase that will briefly describe the link destination.
4. In the **Address Box**, type the link URL.
5. Click **OK**.

Change the Text of a Hyperlink

1. Select the link and then, on the **Insert** Tab in the **Links** group, click **Hyperlink** to open the **Hyperlink** dialog box.
2. In the **Text to Display** box, make any necessary changes to the text.
3. Click **OK**.

ScreenTip

Additionally, you can include **ScreenTip** text that appears when your cursor hovers over a **Hyperlink**, and can be used in a similar way to Alt text. To add ScreenTip text:

1. Place your cursor in the hyperlink you want to add **ScreenTip** text to.
2. On the **Insert** tab, in the **Links** group, click **Hyperlink** to open the hyperlink dialog box.
3. Click **ScreenTip…**
4. Type in your text in the **ScreenTip text** box.
5. Click **OK**.

Include Closed Captions for Any Audio or Video

1. Whenever you use additional audio or video components in a presentation, ensure that the content is available in alternative formats for users with disabilities. (Such as closed captions, transcripts, or Alt text).
2. If you're using PowerPoint 2010 or earlier, you can download and install the sub-titling text add-in for Microsoft PowerPoint (STAMP): http://office.microsoft.com/en-us/powerpoint-help/redir/HA102540315.aspx?CTT=5&origin=HA102013555. The add-in lets you easily create closed captions for video and audio in your presentations.
3. PowerPoint 2016 has a simpler format for caption files, called WebVTT. The video player in the 2016 version of PowerPoint can show those captions when you play the video. The closed captions are stored in a text-based file with a.vtt filename extension. You can create a closed caption file on your own or use a caption-creation tool.

Figure 39–Insert Captions
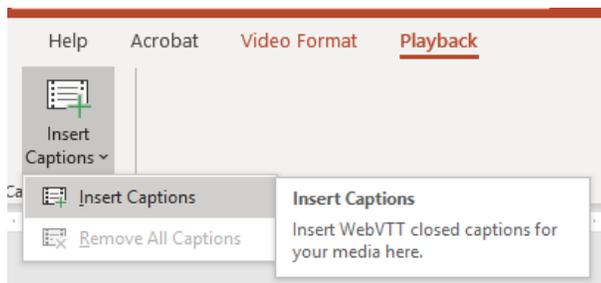
Insert or link to a YouTube Video

For instructions on how to embed a video, follow these instructions from MS Office https://support.office.com/en-us/article/insert-or-link-to-a-video-on-youtube-8340ec69-4cee-4fe1-ab96-4849154bc6db.

Animations and Transitions

Avoid animation and automatic slide transitions since they:

- Can be distracting,
- Can cause screen readers to re-read slides,
- Can read parts of the slide out of order, and/or,
- May not give users enough time to read slide content.

Tips

- Accept or reject and turn off Track Changes.
- Remove all comments from the presentation.
- All slides should be absent of flickering/flashing text and/or animated text.

Logical Reading Order

## Ensure That the Reading Order of Each Slide Is Logical

People who cannot view the slide will hear slide text, shapes, and content read back in a specific order. If you are using objects that are not part of the slide template, it is important to be sure that they will be read by a Screen Reader in the order that you intend them to be.

Z-Order

Z-Order is the order in which objects are placed on the slide. A Screen Reader will read the objects in Z-Order which is from back to front.

Use the **Selection Pane** to place objects in the order you want them read. The items will be read by a Screen Reader from top to bottom. **Format > Editing Pane > Select > Selection Pane**

Figure 40 – Selection Pane
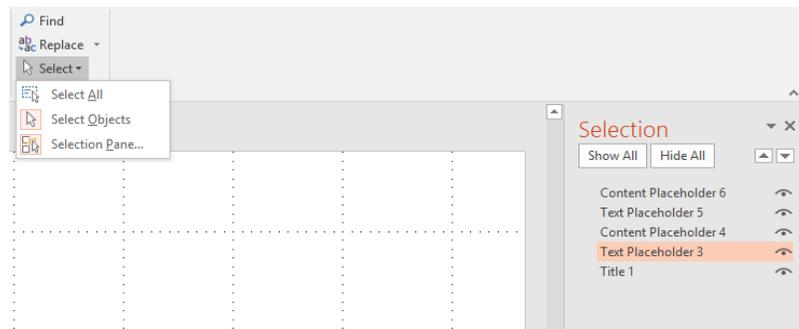
Set a Logical Tab Order

Many presentation applications create content composed almost exclusively of floating objects. This means that they avoid the transitions between in-line content and secondary floating objects (text boxes, images, etc.) that can cause accessibility issues in word processors.

However, when you are working with floating objects, it is important to remember that the way objects are positioned in two dimensions on the screen different from how the objects will be read by a Screen Reader or navigated using a keyboard. The order that content is navigated sequentially is called the Tab Order because often the Tab key is used to navigate from one floating object to the next.

Tips for Setting a Logical Tab Order for Floating Objects

- The Tab Order of floating objects is usually from the lowest object on the slide to the highest.
- Because objects automatically appear on top when they are inserted, the default tab order is from the first object inserted to the last. However, this will change if you use features such as **Bring To Front** and **Send To Back**.
- The slide's main heading should be first in the tab order.
- Headings should be placed in the tab order immediately before the items (text, diagrams, etc.) for which they are acting as a heading.
- Labels should be in the reading order placed immediately before the objects that they label.
- For simple slide layouts, it may be possible to simply insert objects in a logical tab order.
- For more complex layouts, it may be easier to simply create the slide as usual and then set the tab order (see below).

To Set the Tab Order Using the Selection Pane:

1. Go to **Home menu.**
2. In the **Drawing** group, select **Arrange > Selection Pane…**

3. In the **Selection and Visibility** pane, all the elements on the slide are listed in reverse chronological order under **Shapes on this Slide.**
4. Elements can be reordered using the Reorder buttons located at the bottom of the **Selection** and **Visibility** pane.

Note: The tab order of elements begins at the bottom of the list and tabs upwards.

Figure 41 –View of Blank PowerPoint Master Screen
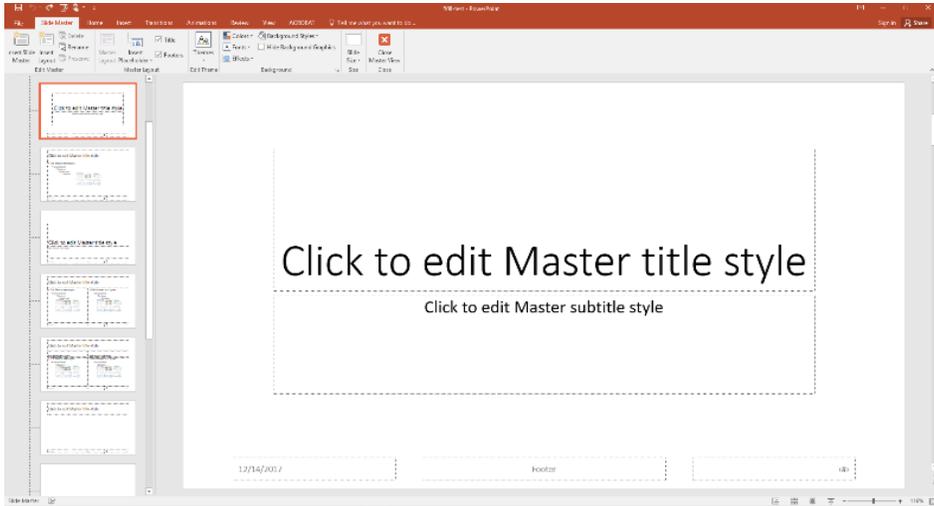
Select **Slide Master** > **Close** > **Close Master View**.

Use Slide Notes

A useful aspect of presentation applications is the ability to add notes to slides, which can then be read by assistive technologies. You can use these slide notes to explain and expand on the contents of your slides in text format. Slide notes can be created as you build your presentation.

Figure 42–View of Slide Notes Page
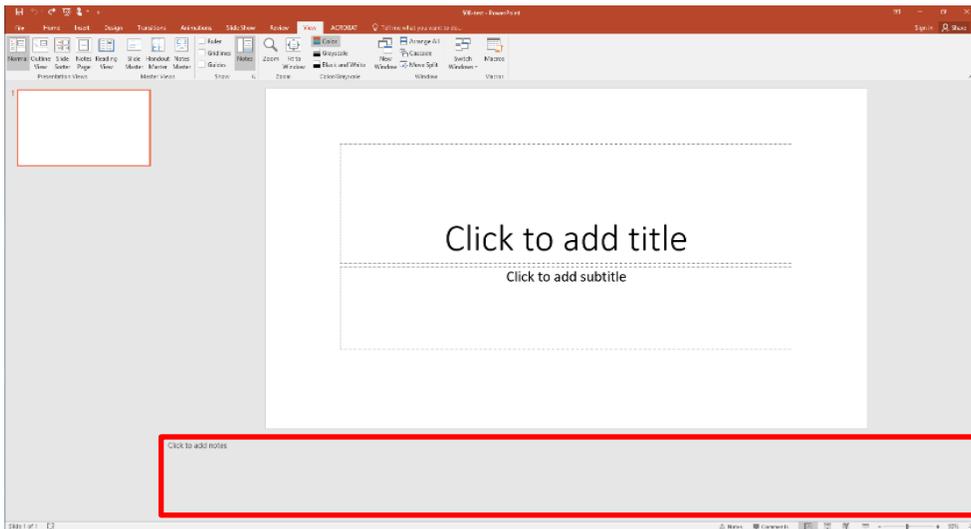
To Add Notes to Your Slides:
1. Go to menu item: **View.**
2. In the **Presentation Views** section, select **Normal** to ensure that the notes panel is in view.

*Note: You can then select menu item **Home**, to access text formatting options.*

3. The **Notes Pane** can be found at the bottom of the window, below the slide.
4. Type and format your notes within the **Notes Pane** below each slide.

Add Alt text to Images and Objects

Alternative text appears when you move your pointer over a picture or object, and helps people using screen readers understand the content of images in your presentation. Alt text should be included for any of the following objects in your presentation:

- Pictures,
- Clip Art,
- Charts,
- Tables,
- Shapes (that don't contain text and are not in groups),
- SmartArt graphics,
- Groups (all objects in this list, except shapes, should also have Alt text when in groups),
- Embedded objects, and
- Video and audio files.

To add Alt text to an image, **Right-Click** on picture, and choose **Format Picture**. With the Format Picture menu open, select the option for **Alt text** in the sidebar. Two fields will appear one labeled **Title** and one labeled **Description**. Type out the title of picture or object and then add descriptive text to the **Description** field.

Figure 43–Format Pictures
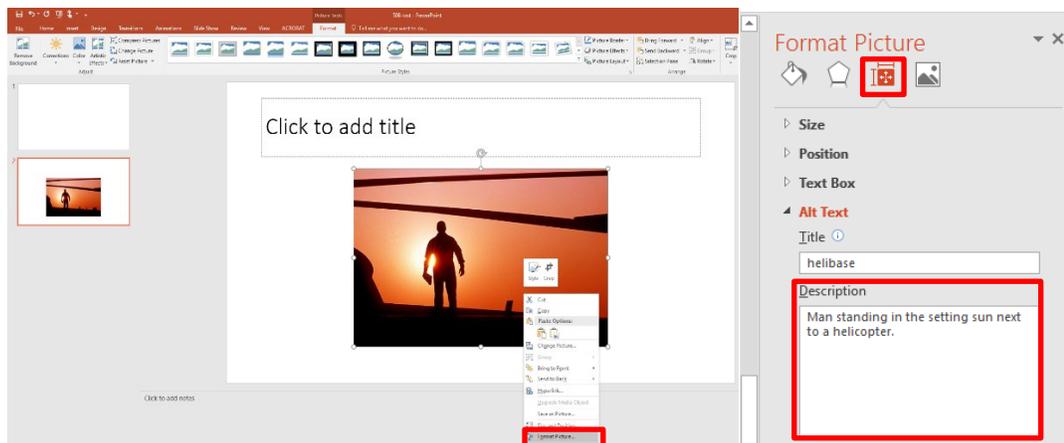
How to Group Small Graphics/Images
1. Select one of the images.
2. Hold down the **SHIFT** key and select the other images that are to be part of the group.
3. **Right-Click** the image.
4. Scroll to **Grouping** and then mouse over to click **Group**.

Alternative Method
1. Open the **Drawing** group by going to **View > Toolbar > Drawing**.
2. Click and drag to select all elements you would like to group.
3. **Right-Click** the image, scroll to **Grouping**, and select **Group**.

Note: Images and shapes will not group in MS Word. You can copy and paste into PowerPoint, group, and copy back to MS Word. However, grouped items will lose their Alt text description and you will need to reapply.

Tables

Header Rows on Tables

Each table created must have the header row (first row in the table) clearly defined so that Screen Reader software will read the table in a manner that is understandable to the end user. Create the table as you would normally and select the table by clicking the four-way cursor in the top left-hand corner of the table.

If tables must be used, they should be constructed with header rows and may not contain merged cells. Reading order is left to right, top to bottom.

A header row is the first row or column in the table. The table should also include a title and, if applicable, a short description if the table is too complex.

Specify Column Header Information in Tables

In addition to adding Alt text that describes the table, having clear column headings provides context and assists navigation of the table's contents.

Designating Table Headers

1. Click on the first row in the table and highlight the row.
2. Go to the **Table Tools > Design.**
3. Check the **Header Row** check box for the **First Column and/or First Row**.
4. Type (or retype) your column headings.
5. Press the **Enter** key.

Figure 44–Designating Table Headers
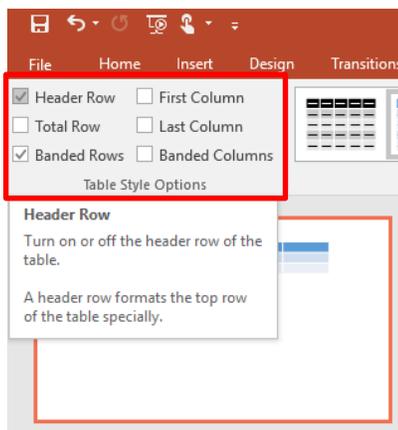
Use Simple Table Structure

To be accessible, the data must be predictable and easy to navigate. Nested tables, merged or split cells, and empty cells should not be used.

Test and Simplify the Table Structure

1. Select the first cell of the table.
2. Press the **Tab** key repeatedly to make sure that the focus moves across the row and then down to the first cell of the next row.

Alt text for Tables

1. **Right-Click** on the **Table**, then click **Format**.
2. Click **Format Shape**.
3. Click **Alt text**.
4. Enter descriptive text of the **Table** into the title and **Description** text boxes.

5. Use clear, but concise descriptions. For example, "a red Ferrari" tells the reader more about the image than "a car."
6. Click **Close**.

Avoid Using Blank Cells for Formatting

Using blank cells to format a table could mislead someone using a Screen Reader to believe that there is nothing more in the table. Fix this by deleting unnecessary blank cells or, if your table is used specifically to layout content within the presentation, clear all table styles by doing the following:

1. Select the entire table.
2. On the **Table Tools Design** tab, in the **Table Styles** group, click the arrow next to the **Style Gallery** to expand the gallery of Table Styles.
3. On the menu below the gallery, click **Clear**.

Convert PowerPoint to Other Formats

PowerPoint is a good format for live presentations, but it is not the best format for distributing content on the web. PowerPoint files can be large, and users must either have Microsoft Office or a special plug-in view them. The slides by themselves usually do not offer a complete summary of the information conveyed. If PowerPoint files are distributed or posted on the web exporting them to PDF is recommended.

Converting Your Presentations to a PDF

Adobe Acrobat Pro software is preferable for making PDF files.

Now that the document has a structure, Alt text for images, formatted columns, and correctly styled tables, it is ready to be converted to the PDF file format. These general steps will help create an accessible PDF.

1. Turn **Track Changes** Off: Check to see if **Track Changes** is on or off.
2. **Remove All Comments.**

Note: Always perform this step. Comments may be hidden.

3. To remove comments, Click on the **Reject Change/Delete Show Markup** under the **Review** tab and make sure **Comments** in unchecked.
4. **All Formatting Marks Turned Off**: All formatting marks must be turned off.
5. Click on **Tools > Options** to display the **Option Menus**. Formatting marks may be found under the **View** tab. Ensure that all formatting marks are turned off.

Convert Your Document to a PDF File
1. With the document open and from the toolbar or ribbon, select **Adobe PDF, or Acrobat**.
2. Click the **Create PDF** Icon.
3. The PDF will automatically open.

Figure 45–Create PDF
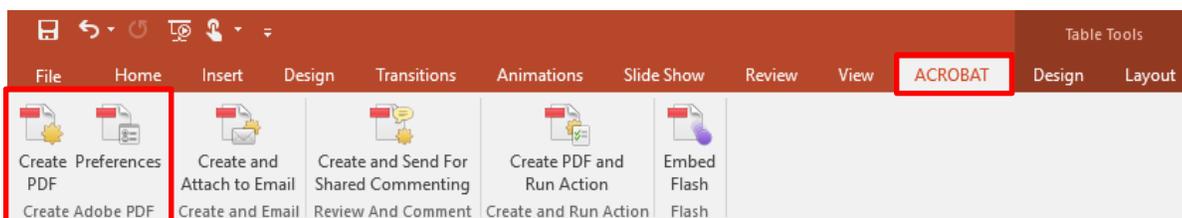
Evaluate PDF Accessibility in Adobe Acrobat Professional
1. Go to menu item **Advanced > Accessibility > Full Check…**
2. In the **Full Check** dialog, select all the **Checking Options.**

3. Select the **Start Checking** button.

Note: Remember to use the Accessibility Checklist at the end of this document to be certain you have followed all steps necessary to make your PDF document accessible.

PowerPoint Accessibility Checklist

ID	Master Requirements for all Documents	Yes (Pass)	No (Fail)	N/A
1.1	Does the document file name not contain spaces and/or special characters?			
1.2	Is the document file name concise, generally limited to 20-30 characters, and does it make the contents of the file clear?			
1.3	Have the Document Properties for Title, Author, Subject, Keywords, Language, and Copyright Status been applied?			
1.4	Does the document utilize recommended fonts (i.e., Times New Roman, Verdana, Arial, Tahoma, Helvetica, or Calibri)?			
1.5	Have track changes been accepted or rejected and turned off?			
1.6	Have comments been removed and formatting marks been turned off?			
1.7	Does the document refrain from using flashing/flickering text and/or animated text?			
1.8	Is the document free of background images or watermarks?			
1.9	Do all images, grouped images, and non-text elements that convey information have meaningful Alt text descriptions?			
1.10	Do complex images (i.e., charts and graphs) have descriptive text near the image perhaps as a caption?			
1.11	Do all URLs contain the correct hyperlink and display the full URL? It should read http://www.nwcg.gov NOT NWCG.			
1.12	Are all URLs linked to correct web destinations?			
1.13	Are email links accessible?			
1.14	Has a separate accessible version of the document been provided when there is no other way to make the content accessible?			
1.15	If there are tables, are blank cells avoided?			
1.16	Is all of the text easy to read in comparison to the background of the document (i.e., has a color contrast ratio of 4.5:1)?			
1.17	Has the document been reviewed in Print Preview for a final visual check?			

ID	General Layout and Formatting Requirements	Yes (Pass)	No (Fail)	N/A
2.1	Can all slide text be viewed in the Outline View?			
2.2	Do all of the slides avoid using flickering/flashing text and/or animated text?			
2.3	Do all of the slides avoid using text boxes or graphics with text within them?			
2.4	Is the list style being used as opposed to manually typed characters (i.e. hyphens, numbers, or graphics)?			
2.5	If multimedia is present, did the multimedia pass the Multimedia Checklist?			

ID	Document Images Requirement	Yes (Pass)	No (Fail)	N/A
3.1	Are multiple associated images on the same page (i.e., boxes in an organizational chart) grouped as one object?			
3.2	Have all multilayered objects been flattened into one image and does that image use one Alt text description for the image?			

ID	Document Tables	Yes (Pass)	No (Fail)	N/A
4.1	If the document has a tabular appearance, was that tabular structure made using the table option as opposed to manual tabs and/or spaces?			
4.2	Do all tables have a logical reading order from left to right, top to bottom?			
4.3	Do data tables have the entire first row designated as a 'Header Row' in Table Properties?			
4.4	Is the table free of merged cells?			
4.5	Are all tables described and labeled where appropriate? Note: In some cases, naming/numbering of tables may not be appropriate. For example, a small data table in a presentation may not need a reference.			
4.6	In Table Properties, is Allow row to break across pages unchecked?			

PDF Checking and Problem Solving

PDF Document Properties

The Title, Subject, Author, Keywords, and Language are important elements of any document. They are used by search engines and screen readers to find and identify content in documents.

Ensure the Document Properties have been filled out when the original document was created:

1. Click on **File**.
2. Then **Properties**.
3. Select the **Description** tab.
4. Complete the fields as follows:
   a. Title: The actual title of the document (not the computer file name).
   b. Author: Your office…Committee name (not your name).
   c. Subject: Brief identification of the subject of the document.
   d. Keywords: Keywords are associated with the document during a search and will effectively rank the document for relevance. The closer your keywords are to the search words the user enters, the higher your document will be ranked in the search. When using multiple keywords, separate them with a comma. Be sure to choose words that are relevant to the content.
5. Next select **Advanced** tab.
6. Go down to **Language** and click on the drop-down arrow and select **English**.
7. This part is now complete. Click on **OK** at the bottom of the page.

Accessibility Check

Once you have completed the **Properties** you will now need to check to see if it passes the accessibility test using Adobe Acrobat Pro. A properly structured MS Word document should have very few errors, if any.

Figure 45 – Accessibility Icon under the Make Accessible Tab in Adobe Acrobat Pro
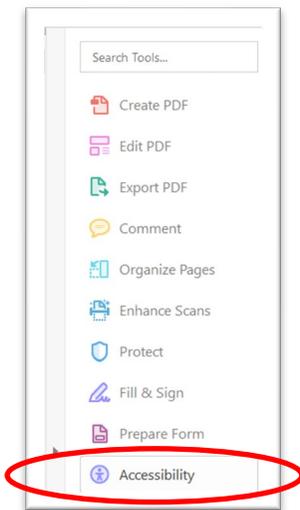
Check Your PDF Using Adobe Acrobat Pro

1. Open up your **PDF** file.
2. Click on **Tools** (located in the upper right-hand corner of your PDF).
3. Another table will appear – select **Action Wizard.**

4. Select **Make Accessible.** This action will guide you through each step in creating and verifying an accessible PDF.
5. Click on **Start.** This will start the automatic fields review. As the process starts, new windows identifying each area will be displayed on your screen. All blanks need to be filled out:
   a. Description.
   b. Recognize Text.
   c. Is this a fillable form?
   d. Set reading language (English).
   e. Acrobat will detect all figures in this document and will display any missing Alt text.
   f. Run accessibility check. Accessibility Checker Options click on the Checking Options dropdown Choose Forms, Tables Lists to add it.
6. Go to bottom of page and click **Start Checking**.

Figure 46–Adobe Acrobat Checking Options
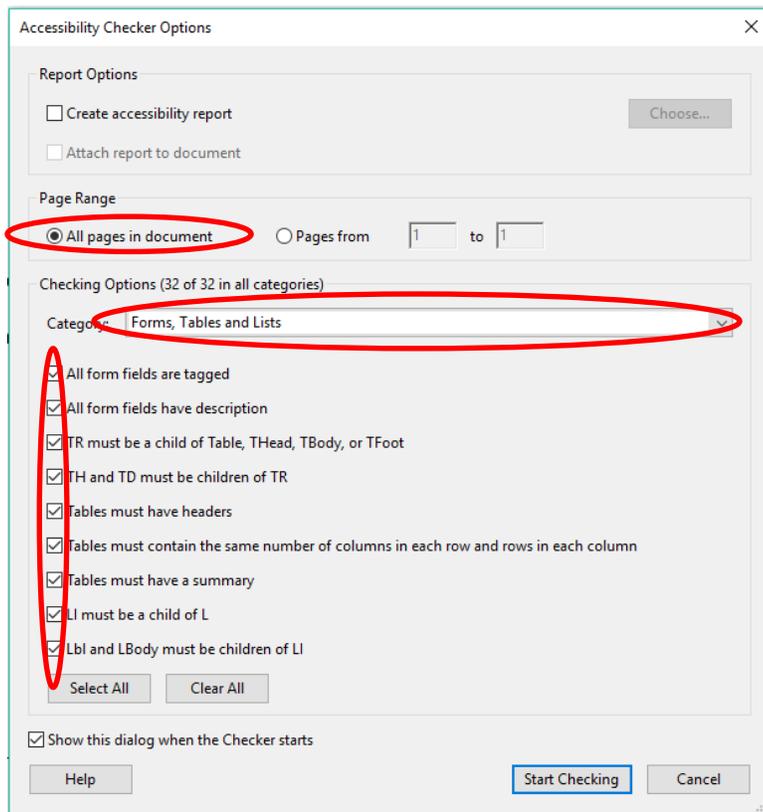
7. The results will appear on the left side of your PDF file. Click on each error to see the area in the document that needs to be fixed.
8. **Right-Clicking** on the error and choose **Fix** (if prompted) will often resolve the error.

Figure 47–Results from Check
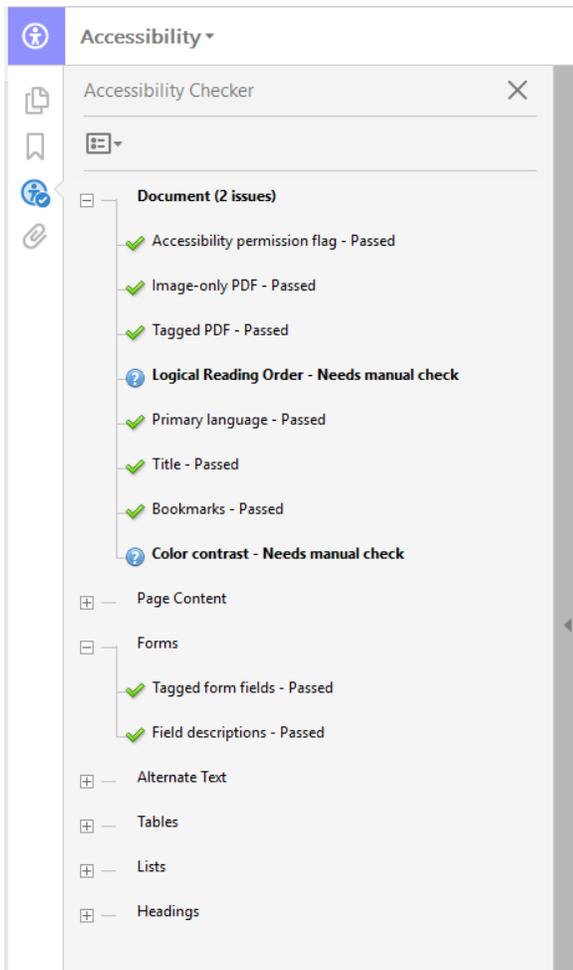
Scanned Documents

You should avoid using documents that have been scanned if at all possible. A scanned document is actually one large image per page and a Screen Reader will see this as a blank page. Scanned documents are not accessible to screen readers without additional work that is often extensive.

To determine if a document is scanned, try to select some text using the **Select Tool**.

Tools > Edit PDF > Select Tool

Look at your cursor. If your cursor looks like a crosshair (+), instead of an I-beam (I), you are working with a scanned document. This will present an accessibility challenge and result in a much bigger file size. A large file size can also be a barrier for website visitors with limited access.

Scanned Image to Text

To make a scanned document accessible, you must convert the image of the document into real text. That is, the text must be selectable and scalable. The first step for turning scanned documents into actual text is to go through a **Recognize Text** process.

Additional accessibility markup will follow by adding tags to your PDF, adding Alt text for images, graphs, and charts, and adding header information to data tables. In addition, text created from a scanned image of a document is often converted into unexpected segments and these segments may be out of order in terms of the expected read-order of the document. You'll need to perform several checks to ensure correct read-order is established, once your document is converted.

Enhanced Scans

Use the Enhanced Scans tool to turn scans or photos of paper documents into searchable PDFs with selectable text.

1. Open the document.
2. Click **Tools > Enhanced Scans > Recognize Text.**
3. Under the **Recognize Text** menu select how many pages, the language, and then click **Recognize Text.**

Figure 48-Enhance Scans
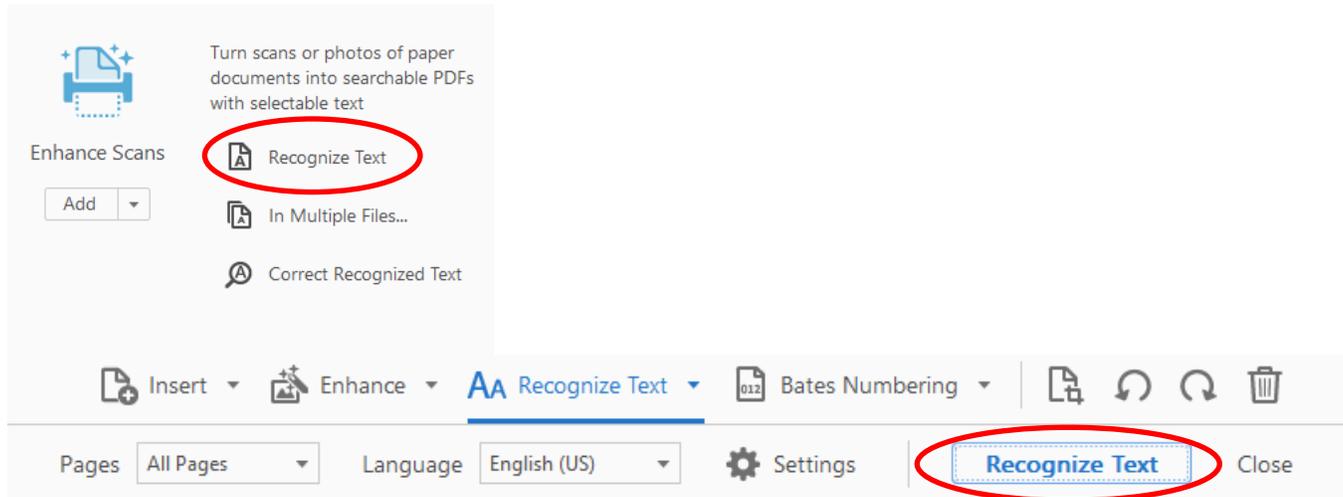
Correct Recognized Text

Acrobat will create a list of suspect words and characters that could not be clearly identified. You can see all the suspect items at once by selecting the **Recognize Text > Correct Recognized Text.**

Verifying Your Document Text

After you have performed **Recognized Text** feature and addressed all the suspect characters, do a quick check to ensure that the text of the document is available to screen readers: **Save As Text (Accessible)**.

1. **File** > **Save As**.
2. In the **Save As** dialog box, change the **Save As Type** to **Text (Accessible) (*.txt)**.
3. Click **Save**. Adobe converts your document to a plain text file using the same text that would be accessible to assistive technology, including Alt text for images and graphics.
4. Open your newly saved text version in Adobe. Compare the text in the plain text version to the text in the PDF version – are they the same? If not, edit the text and/or edit the tags in the PDF version and re-save as **Text (Accessible)** to check again.

Adding Tags to Your Document

Once you are certain that the necessary text is available on the document, you can add tags to your document. Adding tags creates a duplicate of your document that is marked-up for accessibility. Only the very latest assistive technology can read an untagged PDF. Plus, untagged PDF cannot be reflowed to fit available screen size and cannot contain additional information, such as Alt text for images. Thus, only a tagged PDF can be considered accessible.

1. **Tools > Auto tag Document**
2. Acrobat generates a tagged version of the document that can only be viewed in the **Tags** window (left menu).
3. **Accessibility > Tags Icon.**

4. Check tags for accuracy, completeness, and read-order.

Figure 49-Accessibility Menu
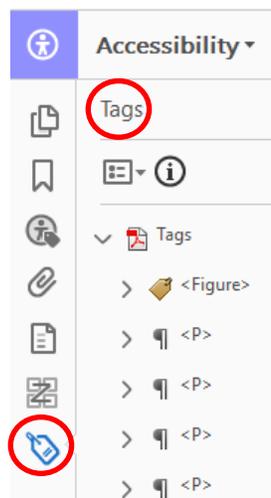
Check Document Accessibility

After adding tags, you can do a few quick-checks to insure the document will work well with assistive technology. You can also use these techniques at any point in your conversion process to check the accessibility of your document.

Highlight Content

Highlighting content is a simple method to confirm accessibility.

1. Text that cannot be highlighted/selected is likely to be skipped or ignored by screen readers.
2. The order that text is highlighted/selected is also the order the text will be read by a Screen Reader. Pay particular attention to text in tables or columns. Does the text in one cell bleed into the text in another? Can you select all of one column and then all of the next? Read-order can be changed by rearranging the tags.

Read Aloud

The best way to check a document's accessibility is to use assistive technology your users will use to access the document. However, if you don't have access to a Screen Reader or screen enlarger, you can still get a sense of how those technologies will interpret your document by listening to it being read by Acrobat's **Read Out Loud** feature. Although not practical for lengthy documents, such as dissertation chapters, or articles, this is a good strategy for shorter documents that will receive high circulation on your website or will be required reading for users.

To Read Out Loud:

1. From the **View** menu, choose **Read Out Loud**.
   a. Press **SHIFT + CTRL + Y** to quickly read the current page.
   b. Press **SHIFT + CTRL + B** to read the entire document.
2. To stop reading: go to the **View** menu, **Read Out Loud**, and choose **Stop** or press **SHIFT + CTRL + E**.

For longer documents, you may want to narrow your reading to only a few key pages, in particularly those pages that contain graphics, tables, columns, or text boxes. If your document is not reading correctly, see Tips and Tricks on Correcting Errors in a PDF file.
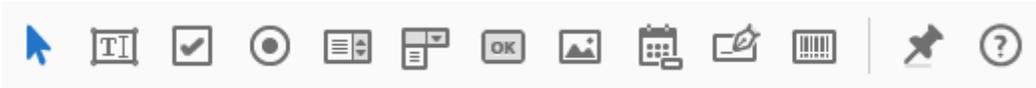
Forms

Forms **must be** created in Adobe Acrobat. Form fields will not convert from MS Word to PDF.

1. Open the document in Adobe Acrobat Select **Tools > Prepare Form**
2. Make sure **Form Field** auto detection is **ON**. Click **Start.** Adobe Acrobat will tag and label each form field that it detects.
3. Go through your document to make sure all form fields were detected.
4. On each form field, **Right-Click**, and select **Properties**. Verify that there is a description in the **Name** area, and the same description in the **Tooltips** area. Fields will not work without both.

If a field is missing, create one by:
1. With the **Prepare Form Menu** open, choose a field type from the top menu (text field, check box, radio button, etc.).

Figure 50-Prepare Form Menu

2. Place the crosshairs at the insertion point, and hold down the mouse button while dragging.
3. Apply the appropriate **Field Name**.
4. **Right-Click** to open the **Properties** dialog box and add a **Tooltip** description.

Fixing Reading Order in Forms:

If you had to add any new fields, then the reading order may be wrong. To fix:

1. With the **Prepare Form** Menu open, click the **Show Tab Numbers** in the **Fields drop-down** menu.
2. The info box that pops up is simply telling you to sort by tab order manually and you will do that next, so click **OK**.
3. Numbers should now be seen in each field. This is the order in which the fields will be read. If there are any numbers out of order on the screen go to the **Fields drop-down** again and select **Order Tabs Manually**. The next info box is simply telling you that we cannot reorder the fields between pages, so click **OK**.
4. Drag the tabs to the correct order.

Tips and Tricks on Correcting Errors in a PDF File

Helpful Hint: Adobe Acrobat does not let you undo changes when fixing PDFs!

Therefore, if you are correcting a lot of errors, the best practice is to make a few changes at a time, do another accessibility check, to make sure the changes worked, save, and continue. In the event the change caused more problems or didn't work, do not save, and revert back to the last good save before moving on. You'll avoid losing hours of work because of one faulty correction.

Tables–Summaries Failed
Summaries are required to pass the accessibility test. We have found no fix at this time to make the summaries follow the tables from MS Word when converting to PDF. They must be redone in the PDF file.

To correct this error in Adobe Acrobat Click Tools > Accessibility > Touchup Reading Order.
1. Touchup Reading Order screen will appear. Click **Close**.
2. **Right-Click** on the table that was identified with no summary and select **Edit Table Summary**.
3. Enter summary information.

Table Summary

If a table has a title, caption, or description (hereafter referred to simply as "title") and appropriate headings, then it doesn't need a summary. If it doesn't have a title, then it needs a summary. Although previous sections may talk about the data in the table, that is not the same as having a title or table summary. Ideally, the title would immediately precede the table in the document; however, the title should not be the header row of the table.

Tables–Headers Failed

1. To correct this error, click **Tools > Accessibility > Touchup Reading Order**.
2. **Touch Up Reading Order** screen will appear. Click **Close**.
3. **Right-Click** on the table that was identified with no header and select **Table Editor.**
4. You should now see a **TD** in each cell.
5. At this point you need to determine which cells are the headers.
6. Click the cell where it shows **TD**. **Right-Click** and select **Table Cell Properties.**
7. Change **Data** cell to **Header** cell.
8. Under **Scope** drop-down choose appropriate tag (whether it's the header for a column or a row).

Regularity Failed

Regularity issues happen when you have merged cells in a table. Tables must contain the same number of columns in each row, and rows in each column – but there is a work-around to fix this issue.

The easiest way to fix this problem is to go back to your original document and fix it there.

To Fix Failed Regularity Using PDF Tools

After you perform an accessibility check, click on the **Tags** icon. This list all sections, paragraphs, tables, etc. Tags indicate the structure of the document and communicate the order in which the items should be read.

To Fix (Example Table Below)

1. Open the **Tags** panel on left side of screen (looks like a little tag).
2. Locate the problem table and click the + symbol to open the string.
3. Open every **Table Row (TR)** and find the one with the highest number of **TH** or **TD** cells.

Note: In the example below there's only one tag under the Table Header Merged cells area–there should be three tags.

4. You need to change this by adding more **TH** or **TD** tags.

Figure 51–Tags Section Displaying the Table Data and Header Cells

5. Start by going to Table Cell Properties and change the merged cell to a Header cell, **Scope** is **None**.
   a. Click on **Tools**.
   b. Click on the **Touch Up Reading Order**.

Figure 52–Acrobat Displaying the Touch Up Reading Order Icon
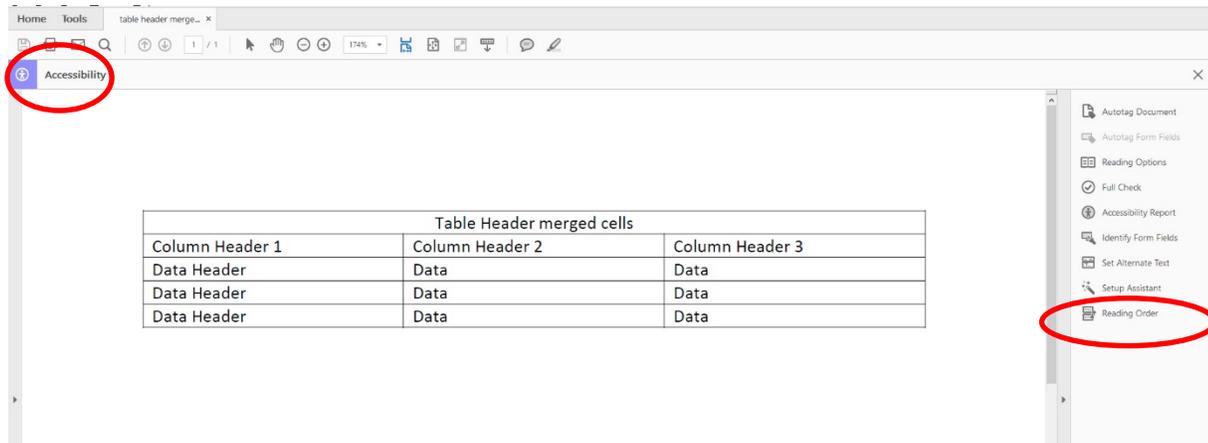
   c. Once the **Touch Up Reading Order** screen appears, click on **Close** (this action merely highlights the items on the page for you).
   d. **Right-Click** on the table and select **Table Editor** to show you the **TH** and **TD** cells.

Figure 53–Touch Up Reading Order Screen
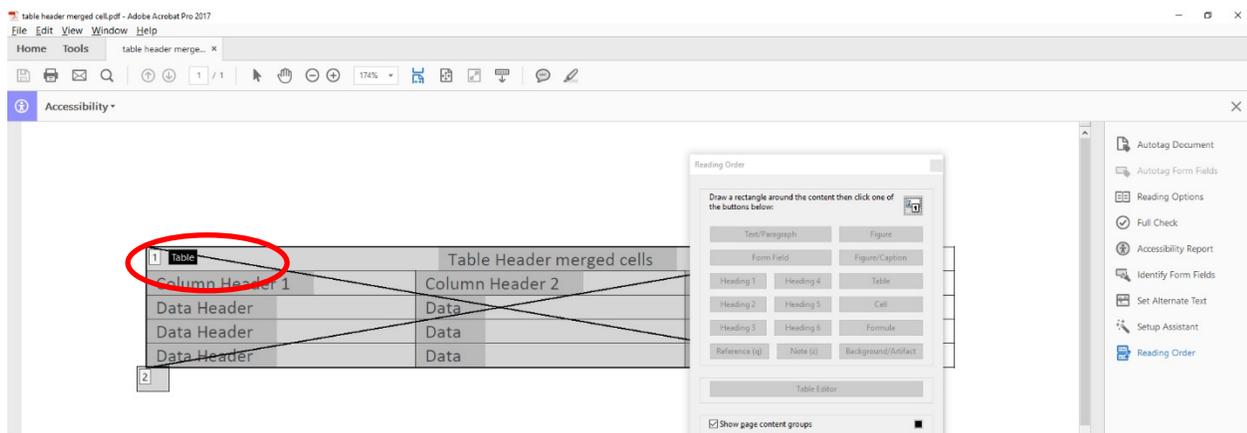
   e. **Right-Click** on **TD** to select the **Table Properties** screen.
   f. Change the merged cell (Table Header Merged Cells) to a Header cell, **Scope** is **None**.

Figure 54–Table Cell Properties Menu
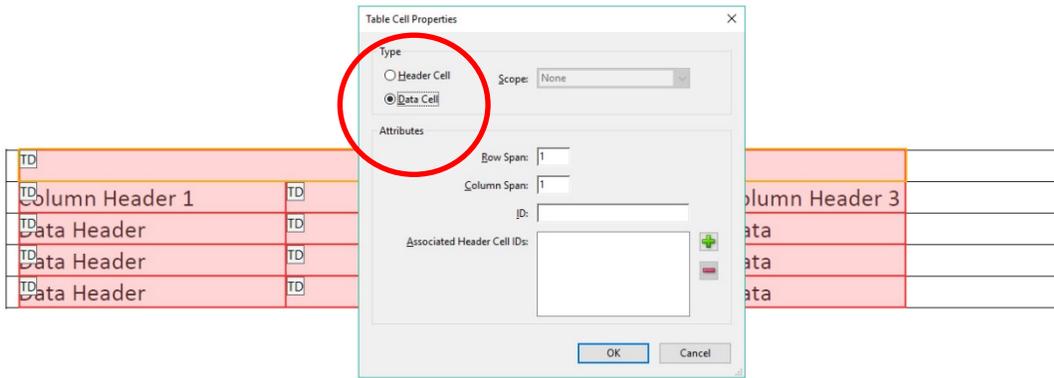
g. Next change the cells labeled Column Headers to Header cells, **Scope** is **Column**.

Figure 55–Table Cell Properties Menu Showing Column Headers
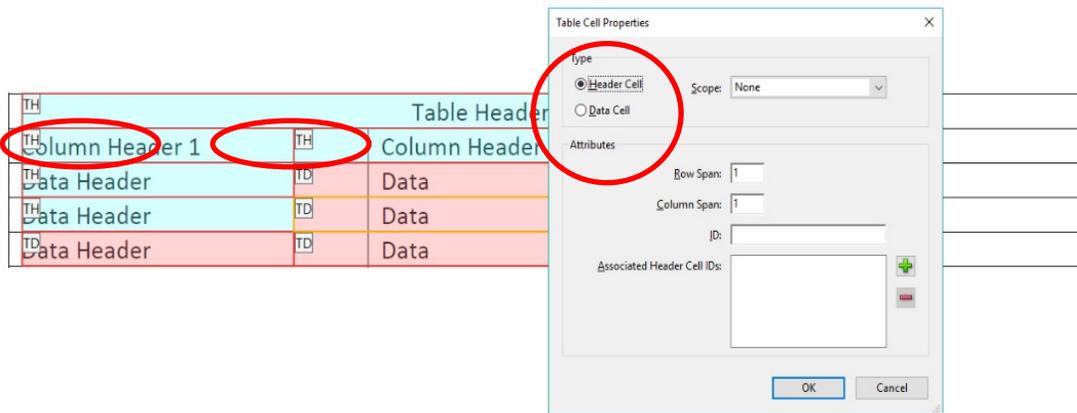
h. If your table also has Header Rows change the cells labeled Data Headers to Header Cell, **Scope** is **Row**.

Figure 56–Table Cell Properties Menu Showing Row Headers
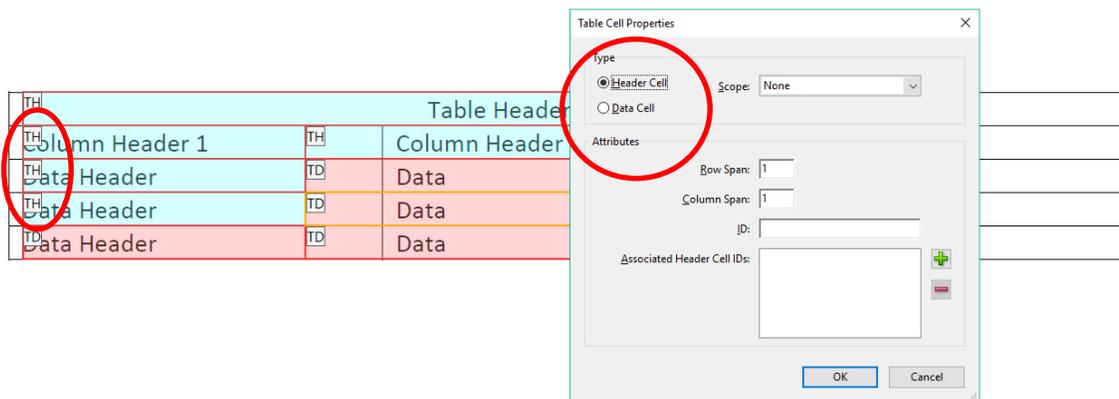
Add New Tags to the Table
1. Open the **Tags** panel again and locate the irregular table.
2. Open the first **TR** in the **Tags** panel.
3. **Right-Click** and select **New Tag**.
4. Set **Type** to **Header Cell** from the drop-down menu and click **OK**. Repeat step until number of **TH** tags matches other Table Rows. All **TR** sections should have the same number of tags.

Figure 57–Tags on the Left Side of the Page and the New Tag Menu Opened
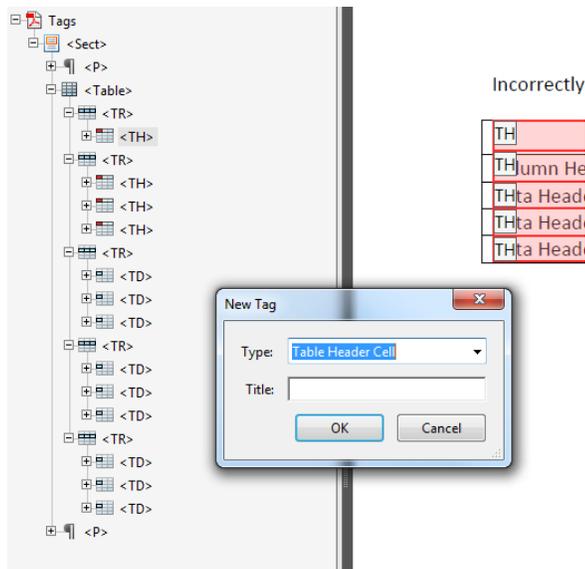
5. New tags should be nested under the **Table Row** and not the **Table**. You can drag to the correct area if needed. For **Table Rows** with **TH** and **TD** tags (if you need to add more tags), there should only be one **TH**…the rest can be **TDs**. Repeat **New Tag** steps and change **Type** to **Table Data Cell** for **TDs**.

Figure 58–Tags Menu with Correct Tag Structure
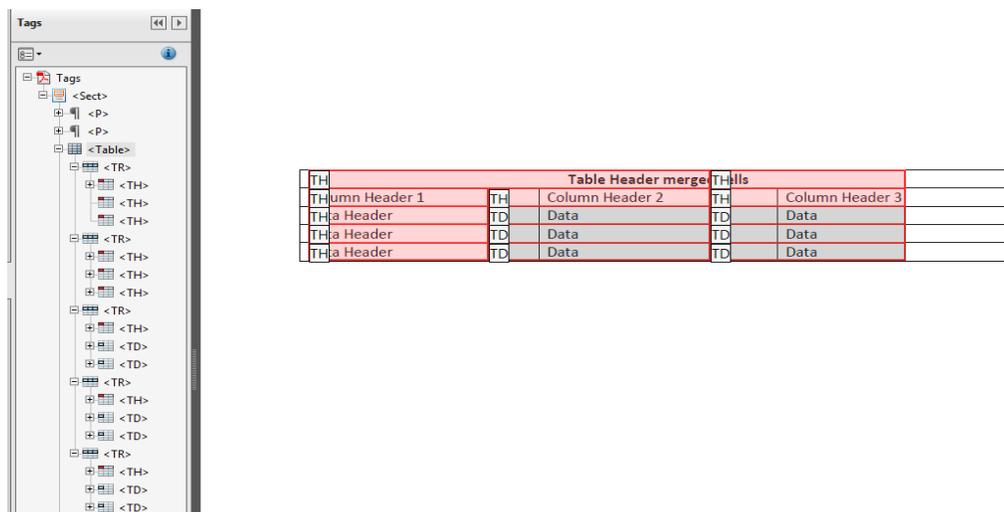
The irregular table should now be fixed and read correctly.

Touchup Reading Order

Choose **Tools > Accessibility > Touchup Reading Order** to select the Touchup Reading Order tool.

Figure 59–Touch Up Reading Order View
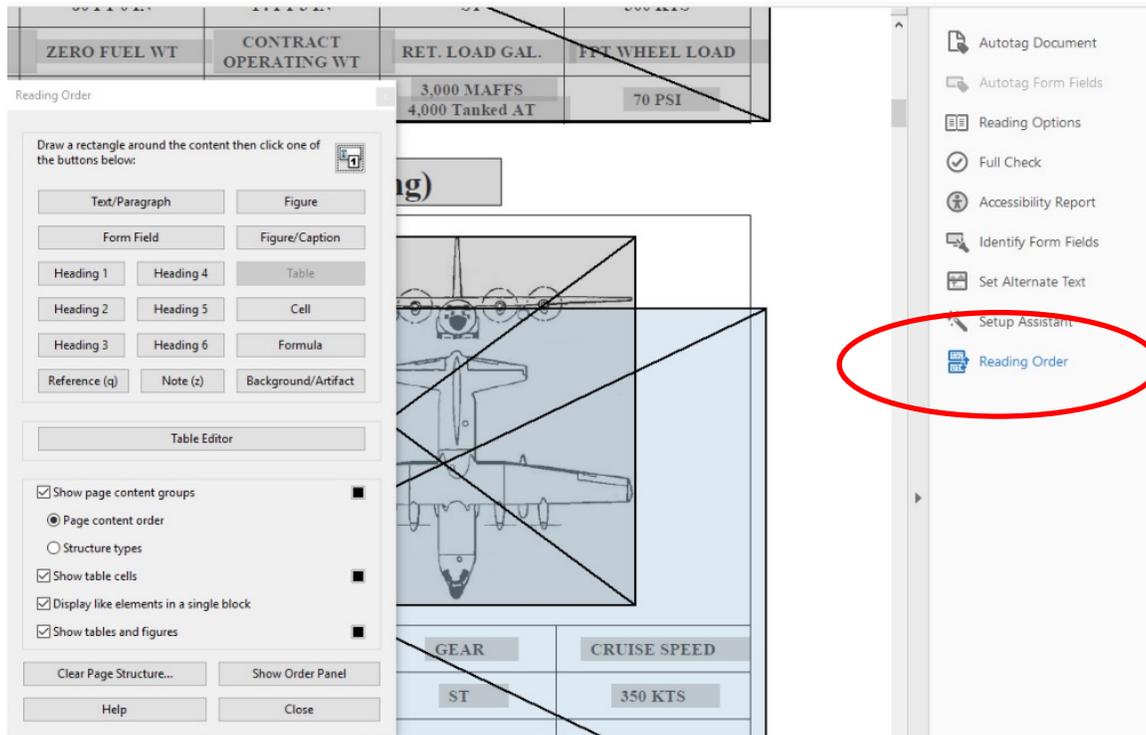
The Touchup Reading Order tool provides the easiest and quickest way to fix reading order and basic tagging problems. The tool opens a dialog box and overlays page content with gray or blue highlighted boxes. Each box is numbered and indicates the region's placement in the page's reading order.

To Correct Reading Order:

1. From the **Touch Up Reading Order** window, select show order panel.
2. On left side of the screen, under **Order**, select the out of order item and drag it to the correct location in the reading order.

After visually checking the reading order of the page, it's a good idea to use the **Read Out Loud** feature, found under **View**, to confirm that assistive technology reads the page correctly.

Figure 60–Z-Order or Reading Order Panel

Unfortunately, more often than not, graphic images will not be in order, and using the Z-Order panel may not correct the problem. Also, you may find that when you drag an element it merges with another and then will not read correctly. Do not save and revert if this happens. Instead, correct tagging issues as needed using the following steps in **Correct Out of Order Tags**.

Correct Out of Order Tags
1. Open the **Tags** panel.
2. Find the **Tag** that is out of order (Figures are often at the beginning or very end of the tag structure).

Figure 61–Incorrect Tag Structure

3. Drag the tag(s) to the correct location in the **Tags** panel to match the screen layout. Do this for each page where the graphics or text are not in order. Notice how <Figures> are now below the <H1> and above the <P>.

Figure 62–Correct Location of Tags
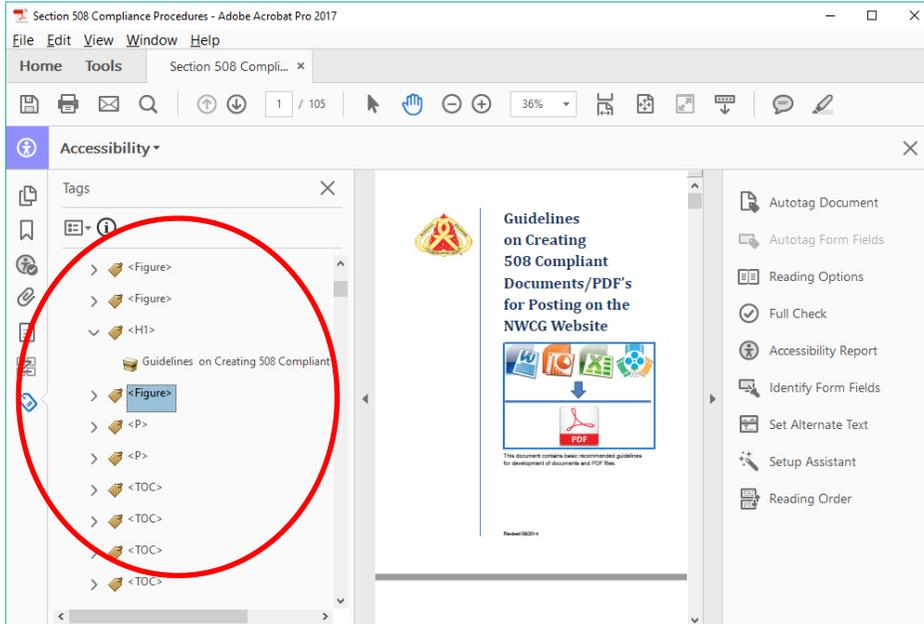
Setting Content to Background

Often content such as decorative lines between paragraphs or borders around pages don't offer anything other than visual appeal and don't necessarily need to be read aloud. These kinds of images can be set to background so assistive technology won't attempt to read them.

1. Open the Touch Up Reading Order window.
2. Select the item by either clicking on it or dragging your cursor while holding down the right mouse button over the entire image. It helps to zoom in.
3. With the element selected, click the background button in the **Touch Up Reading Order** screen. Or **Right-Click** and choose background from the fly-out menu.
4. You may need to go into the **Tags** panel and delete any empty tags left there after you have set them to background. An empty tag does not have a (+) sign in front of it.

Changing Content Tags

Sometimes Adobe gets it wrong. You may see content that was labeled a table instead of text, or labeled a paragraph instead of a heading. If text is not labeled at all, apply one. Simply select the incorrect group and either use the **Touch Up Reading Order** window to apply the correct label, or **Right-Click**, and select the correct label from the drop-down window. From the **Tags** panel you can select the tag, **Right-Click**, and choose **Properties** to apply to correct label type.

List Errors

If you don't create lists using the correct tools on the Home tab, it's a time-consuming, and confusing to fix

Figure 63–Correct Order for List Items in the Tag Structure
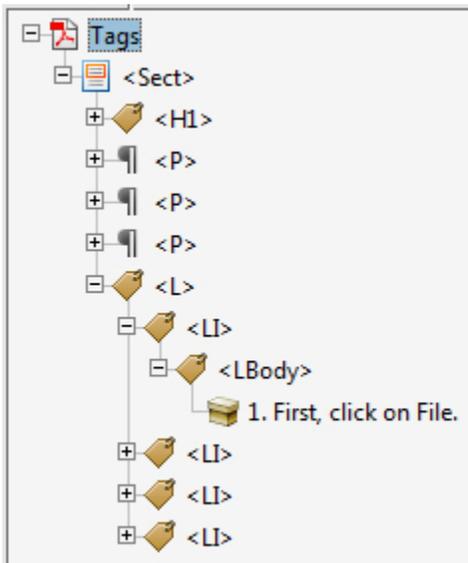
- List <L> is always the main folder for the group.
- List Item <LI> is the folder for the numbered items and items listed under that number.
- List Body <LB> is the folder for the actual text. This goes under List Item.
- Lists are also created when we have linked content from a TOC structure.

Figure 64–Example of a Complex List Structure

1. Wildland Fire Overview
2. Introduction
3. Ecological Aspects of Wildland Fire
    a. Fire Triangle
    b. Fire Behavior
    c. The Complexity of the Fire Ecology Message
4. Defining Fire Regimes
    a. Fire Regime Condition Class
5. Fire Dependent Ecosystems of the United States
    a. Impact on Animals
    b. Overview of Fire Dependent Ecosystems
        i. Midwest Tallgrass Prairie
        ii. Southwest California Chaparral
        iii. Ponderosa Pine in the Southwest and Intermountain West
        iv. Lodgepole Pine Communities of the Rocky Mountains
        v. Southern Pine Communities
        vi. Jack Pine Communities of the Great Lakes Region
        vii. Alaska's Boreal Forest and Tundra
        viii. Atlantic Coastal Pine Barrens
        ix. Eastern Deciduous Forests
6. Fire Effects

Figure 65–Example of Linked List Tag Structure

If your list links from another part of the document such as the TOC, you will see a Link – OBJR. This folder will reside under the <LI> folders.

Acrobat may incorrectly place content in the wrong structure and you will have to fix it. Simply drag the <Lbl> and <LBody> content, not the folder, under the Link – OBJR folder and delete the now empty <Lbl> and <LBody> folders.

Annotation Errors

There are many kinds of annotations. The key is knowing what you are looking at before you begin.

If you get a Tagged Annotations Failed error.

5. Right-Click on the listed error to see it. Notice what kind of content it is.
6. In the error panel, Right-Click on the listed error and choose View in Content Panel.
7. In the Content Panel, the error is listed under the Annotations.
8. Choose the Options drop-down and select Find.
9. In the Find Element window, select Unmarked Annotation.
10. Choose Search Page or Entire Document.
11. Click on the Find button at the bottom of the window. If it finds unmarked annotations, the Tag Element box will become available.
12. Notice what is highlighted on the page first, then click the Tag Element button.
13. Select the Type (most common is a Link or Form) and say OK.
14. The Tag Element button will remain available until all untagged annotations have been resolved.

Tagged Form Fields

When **Tagged Form Fields** fail, follow the same steps as above. After clicking the **Tag Element** button, choose the **Type** drop-down, and select **Form**.

Tab Order

With a **Tab Order – failed**, try Right-Clicking on the error first and select fix. To manually fix the tab order for links, form fields, comments, and other annotations:

1. Click the Pages panel on the navigation pane.
2. Click a page thumbnail, and then choose Page Properties from the Options menu.
3. In the Page Properties dialog box, choose Tab Order. Then, select Use Document Structure, and click OK.

Encoding Errors

Encoding errors happen when:

1. A document created on a Mac using special characters is saved as a PDF and then opened on a PC, or
2. Font conflicts occur. The best way to avoid these issues is to use OpenType, or install the missing fonts on your computer. For Mac users saving documents for PC use, convert fonts to curves/outlines before saving as a PDF.

We can't recreate one of these errors, but we can suggest how to fix them if you encounter one.

1. Click on the error in the **Accessibility Checker** panel to locate the element on the page.
2. Next open the **Content Editing** tab in the **Tools** panel.
3. Select **Edit Text and Images**.
4. Highlight the error on the page itself and under format try changing the font. If you can find a font that is compatible with what was used, it may fix the problem.
5. If this doesn't work, and you have no way of obtaining the original to edit, you can delete the offending element and try replacing it by adding a new text element or image. Be careful not to change content essential to the meaning of the document.

Using the Acrobat Pro Accessibility Checker

A complete walkthrough of Acrobat Pro Accessibility Checker, is available at https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html#check_accessibility_of_PDFs.

Analyze PDF files and add enhancements to make documents accessible to all users.

Submitting Documents for Web Posting

Web updates or changes can be submitted via email to: BLM_FA_NWCG_Webmaster@blm.gov.

Send an email with your request, the corresponding web page URL and reasons for your updates. This not only helps us in our record-keeping but also facilitates input.

1. Submit all documents in their original format (MS Word, Excel, PowerPoint, etc.).
2. Submit a PDF if it is accessible.

Font Index

Following are fonts commonly found in MS Word and at this time known to be accessible. We suggest limiting your document to no more than two fonts, using Arial, Calibri, or Times New Roman as your body (normal) text, and possibly another for heading use.

MS Word Accessible Fonts	
Agency FB	Constantia
Albany	Cooper
Albertus	Copperplate Gothic
Algerian	Corbel
Andale	Cordia Coronet
Andalue	Cornet
Angsana New	Courier
Antique Olive	Curlz
Aparajita	DauaPeah
Arabic typesetting	DFKai
Arial	Dillenia
Baskerville Old Face	DokChamps
Batang	Dotum
Bauhaus	Ebrima
Bell	Edwardian Script
Berlin Sans	Elephant
Bernard	Engravers
BlackLadder	Eras
Bodoni	Estrangelo
Book Antiqua	Eurcrozia
Bookman Old Style	Euphemia
Bookshelf Symbol 7	FangSong
Bradley Hand	Felix Titling
Britannic Bold	Footlight
Browallia New	Forte
Brush Script	Franklin Gothic
Calibri	Freesia
Californian	Freestyle Script
Calisto	French Script

MS Word Accessible Fonts	
Cambria	Gabriola
Candara	Garamond
Castellar	Gautami
Centaur	Georgia
Century	Freesia
Century Gothic	Freestyle Script
Century Schoolbook	French Script
CG Omega	Gabriola
CG Times	Garamond
Chiller	Gautami
Clarendon	Georgia
Colonna	Freesia
Comic Sans	Gigi
Consolas	Gill Sans
Gloucester	Microsoft Himalaya
Goudy Old Style	Microsoft Jheng Hei
Goudy Stout	Microsoft New Tai Lue
Gulim	Mocrosoft PhagsPa
Gungsuh	Microsoft Sans Serif
Hattenschweiler	Microsoft Tai Le
Harlow Solid	Microsoft Ughur
Harrington	Microsoft YaHei
High Tower	Microsoft Yi Baiti
Impact	MingLiU
Imprint	Mistral
Informal	Modern No. 20
Iris	Mongolian Baiti
Iskoola Pota	Monoty[e Corsiva
Jasmin	MoolBoran
Jokerman	MS Gothic
Juice	MS Mincho
KaiTi	MS Outlook

MS Word Accessible Fonts	
Kalinga	MS PGothic
Kartika	MS PMincho
Khmer	MS Reference Sans
Kodchiang	MS Reference Specialty
Kokila	MS UI Gothic
Kristen	MT Extra
Kunsteler Script	MV Boli
Lao	Niagara Engrave and Solid
Latha	NSimSun
Leelawadee	Nyala
Letter	OCR
Lucida Bright	Old English Text
Lucida Caligraphy	Onyx
Lucida Console	Palace Script
Lucida Fax	Palatino
Lucida handwriting	Papyrus
Lucida Sans Typewriter	Parchment
Lucida Sans Unicode	Perpetua
Magneto	Plantagenet Cherokee
Maiandra	Playbill
Malgun	PMing
Mangal	Poor Richard
Marigold	Pristina
Marlett	Raavi
Matura	Rage
Meiryo	Ravic
Rockwell	Tempus
Sakkai majalla	Times New Roman
SAPDings	Traditional Arabic
SAPIcons	Trebuchet
Script	Tunge
Segoe	TW Cen

MS Word Accessible Fonts	
Shonar Bangla	Universe
Showcard gothic	Utsaah
Shruti	Vani
SimiHei	Verdana
Simplified Arabic	Vijaya
SimSun	Viner Hand
Snap	Vivaldi
Stencil	Vladimire Script
Sylfaen	Vrinda
Symbol	Wide Latin
Tahoma	

These are the fonts known to have issues. We suggest not using them.

MS Word Fonts with Known Accessibility Issues	
Adobe Arabic	Giddyup
Adobe Caslon	Hobo
Adobe Fan Heiti	Kozuka Gothic
Adobe Fangsong	Levenim
Adobe Garamond Pro	Lithos
Adobe Gothic	Lucida Sans
Adobe Hebrew	Mesqutte
Adobe Heiti	Minion pro
Adobe kaiti	Miriam
Adobe Ming	Myriad Pro
Adobe Myungjo	Narkisim
Adobe Nash	Nueva
Adobe Song	Orator
Aharoni	Poplar
Birch	Prestige
Blackoak	Rod
Chaparral Pro	Rosewood
Charlemagne	Tekton

MS Word Fonts with Known Accessibility Issues	
David	Trajan Pro
FrankRuehl	

Symbol Shortcuts

Alt + (the number)

Sym	#	Sym	#	Sym	#	Sym	#	Sym	#	Sym	#	Sym	#	Sym	#	Sym	#
☺	1	▲	30	<	60	Z	90	x	120	û	150	╣	180	π	210	≡	240
●	2	▼	31	=	61	[	91	y	121	ù	151	╢	181	╚	211	±	241
♥	3	spac	32	>	62	\	92	z	122	ÿ	152	╟	182	╘	212	≥	242
♦	4	!	33	?	63	]	93	{	123	Ö	153	╖	183	╒	213	≤	243
♣	5	"	34	@	64	^	94	|	124	Ü	154	╕	184	╓	214	⌠	244
♠	6	#	35	A	65	_	95	}	125	¢	155	╣	185	╫	215	⌡	245
•	7	$	36	B	66	`	96	~	126	£	156	║	186	╪	216	÷	246
◘	8	%	37	C	67	a	97	⌂	127	¥	157	╗	187	┘	217	≈	247
○	9	&	38	D	68	b	98	Ç	128	₧	158	╝	188	┌	218	°	248
◎	10	'	39	E	69	c	99	ü	129	ƒ	159	╜	189	█	219	·	249
♂	11	(	40	F	70	d	100	é	130	á	160	╛	190	▄	220	·	250
♀	12	)	41	G	71	e	101	â	131	í	161	┐	191	▌	221	√	251
♪	13	*	42	H	72	f	102	ä	132	ó	162	└	192	▐	222	ⁿ	252
♫	14	+	43	I	73	g	103	à	133	ú	163	┴	193	▀	223	²	253
☼	15	,	44	J	74	h	104	å	134	ñ	164	┬	194	α	224	■	254
►	16	-	45	K	75	i	105	ç	135	Ñ	165	├	195	ß	225		255
◄	17	.	46	L	76	j	106	ê	136	ª	166	─	196	Γ	226		
↕	18	/	47	M	77	k	107	ë	137	º	167	┼	197	π	227		
‼	19	0	48	N	78	l	108	è	138	¿	168	╞	198	Σ	228		
¶	20	1	49	O	79	m	109	ï	139	⌐	169	╟	199	σ	229		
§	21	2	50	P	80	n	110	î	140	¬	170	╚	200	µ	230		
▬	22	3	51	Q	81	o	111	ì	141	½	171	╔	201	τ	231		
↨	23	4	52	R	82	p	112	Ä	142	¼	172	╩	202	Φ	232		
↑	24	5	53	S	83	q	113	Å	143	¡	173	╦	203	Θ	233		
↓	25	6	54	T	84	r	114	É	144	«	174	╠	204	Ω	234		
→	26	7	55	U	85	s	115	æ	145	»	175	═	205	δ	235		
←	27	8	56	V	86	t	116	Æ	146	░	176	╬	206	∞	236		
∟	28	9	57	W	87	u	117	ô	147	▒	177	╧	207	φ	237		
↔	29	:	58	X	88	v	118	ö	148	▓	178	╨	208	ε	238		
		;	59	Y	89	w	119	ò	149	│	179	╤	209	∩	239		

Some other often used Symbol shortcuts: ™ (Alt+Ctrl+T), © (Alt+Ctrl+C), ® (Alt+Ctrl+R)