

This document will provide a hands-on learning opportunity for participants during the classroom training.

Accessibility @ MISD



Macomb Intermediate School District

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Chapter 1 – Introduction

PDF Files - Overview

Cascade Server is the Content Management System being used at MISD to update web pages that are part of misd.net. When creating websites in Cascade Server, the templates used to create HTML pages, together with the accessibility checker, are designed to insure that the web pages are accessible.

PDF documents that are linked from each website need to be created, checked, and modified separately to make sure that they are also accessible.

Best Approach

PDF files typically begin as files created in a Microsoft Office program such as Word, Excel, or PowerPoint.

The best approach to making sure that a PDF file is accessible is to begin with a source document from Microsoft Office that is already accessible before it is converted to PDF.

When the original Microsoft Office document is not available, or cannot be easily re-created, it is possible to fix accessibility errors in Adobe Acrobat DC.

Checking and modifying each PDF file can be a time-consuming process. A good starting point is making sure each site in Cascade Server contains only those PDF files that are being used. Extra PDF files that are not being used can be downloaded to your computer and removed from the site.

This guide is meant to be used, along with other training resources, to learn how to:

1. Manage PDF files effectively in Cascade Server.
2. Create an Accessible Word document that can be converted to PDF.
3. Use Adobe Acrobat DC to identify and fix accessibility issues.
4. Replace PDF files in Cascade Server with new revised (and accessible) versions.

Chapter 2 – PDF File Management

Overview

Checking and modifying each PDF file can be a time-consuming process.

A good starting point is making sure each site in Cascade Server contains only those PDF files that are being used.

Extra PDF files that are not being used can be downloaded to your computer and removed from the site.

PDF File Check – Cascade Server

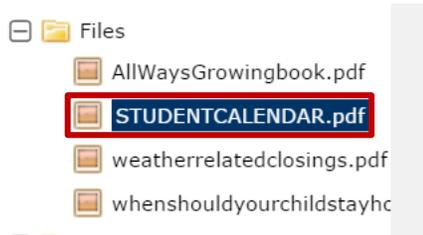
Items such as images, PDF files, and other web pages are included on the site using links.

In Cascade Server it is possible to see what files have links from other pages by using the **Relationships** tab.

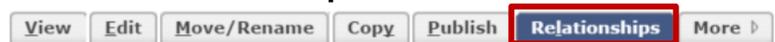


The process for checking what PDF files are being used on the site:

1. Select a file from the list on the left side of the Cascade Server screen.



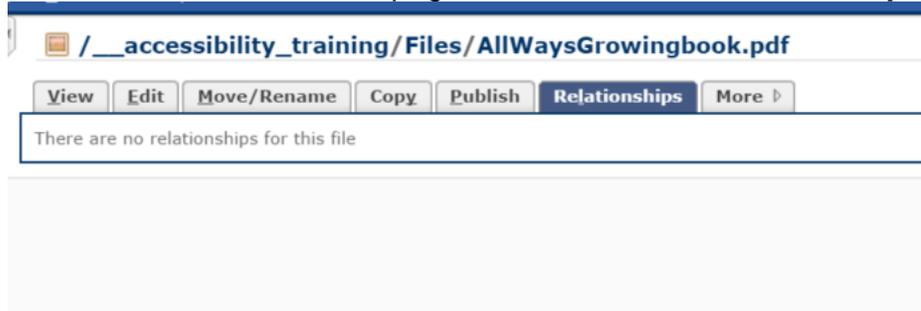
2. Select the **Relationships** tab.



3. View the pages that contain links to the PDF file.



- When a PDF file is selected that is not linked from anywhere on the Cascade Server site there will be no pages listed under the **Relationships** tab.



If there are links to other folders in Cascade Server those relationships will be displayed under the Relationships tab. However, if you have sites outside of Cascade Server that link to the PDF file those will not be listed.

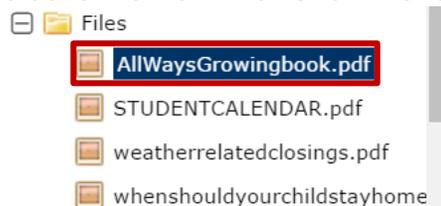
Download PDF Files to Archive

If a PDF file is not being used then it might be a good idea to remove it from the Cascade Server site unless there are plans to use it in the near future.

It is sometimes helpful to archive the PDF file before removing it to be sure there is a local copy of the file available if it is needed in the future.

The process for archiving PDF files before removing them from the site:

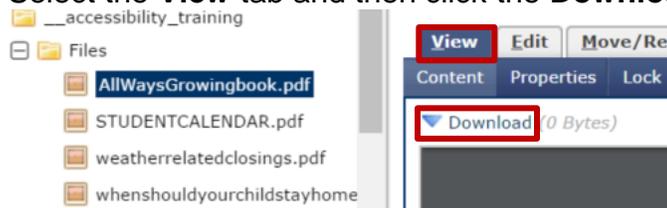
- Select a file from the list on the left side of the Cascade Server screen.



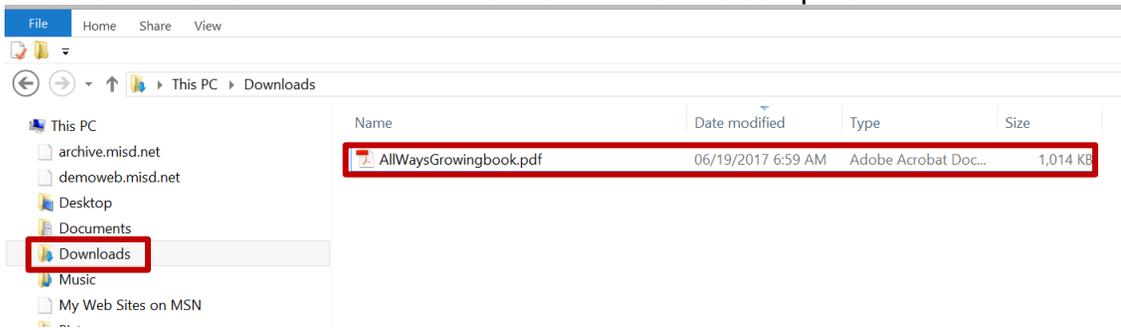
- Double-check the **Relationships** tab to make sure there are no links to the file.



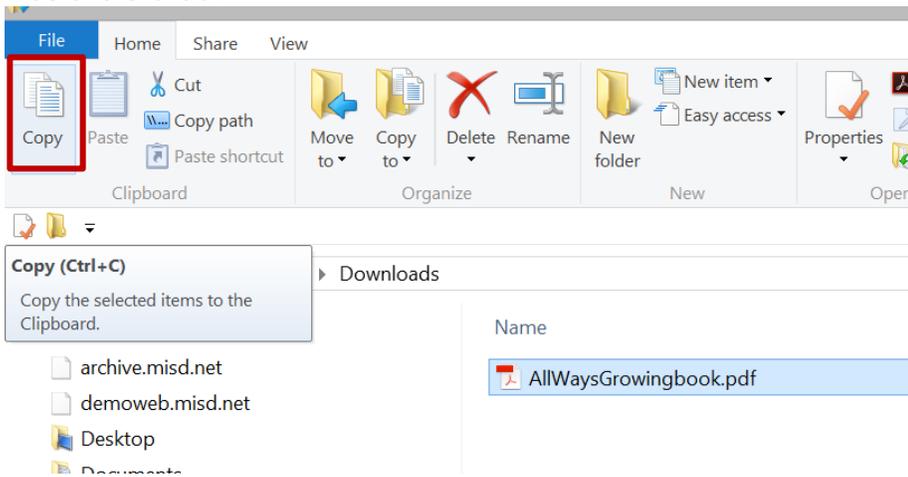
- Select the **View** tab and then click the **Download** link.



4. The file will be listed in the **Downloads** folder of the computer.



5. From there the PDF file can be copied to the network location where the site PDF files are stored.

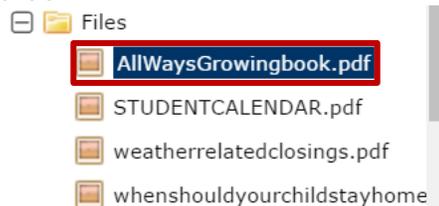


Remove PDF Files Not in Use

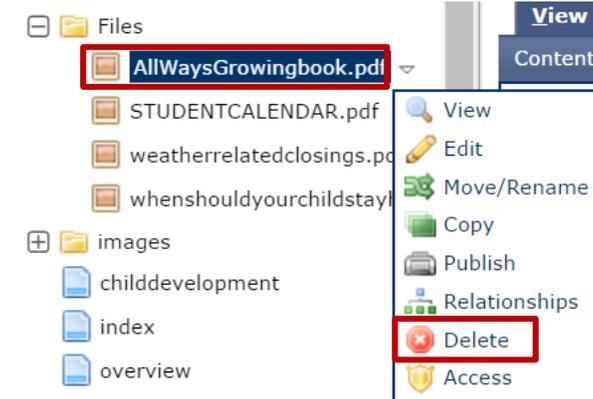
Once the PDF file is archived, it can be removed from Cascade Server if it is not being used.

The process for removing PDF files from the site:

1. Select the file to be removed from the list on the left side of the Cascade Server screen.



2. Select the down arrow to the right of the file name and choose the **Delete** command.



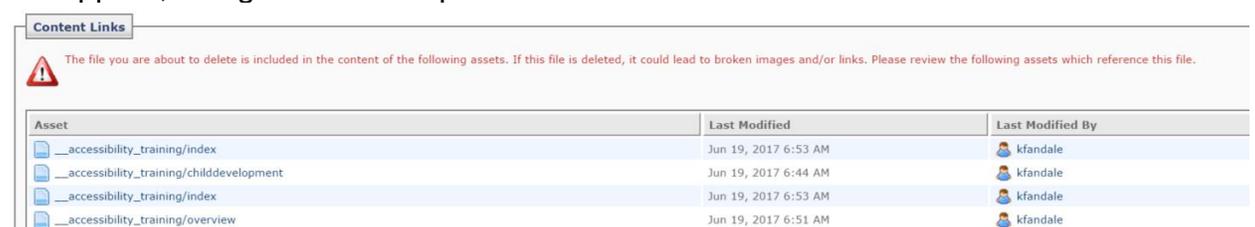
3. There will be a message that indicates the asset is capable of being unpublished from the remove server.



4. Then click **Submit**.



5. If the file that being removed has links from other pages the following message will appear, along with a list of places with links to the file.



*Do not delete files that have **Content Links** listed.*

Chapter 3 – Accessible Word Document

Overview

The best approach to making sure that a PDF file is accessible is to begin with a source document from Microsoft Office that is already accessible before it is converted to PDF.

In this guide a Word document is used as the source document since that is the most common source. However, a similar process can be followed when using Excel or PowerPoint as the source.

There are separate training handouts and Lynda.com tutorials that outline creating accessible documents in Word, Excel, and PowerPoint.

Plan Contrast between Text and Background

If there is a good level of contrast between the text and background of a document, people with vision impairments will be better able to see and use the content.

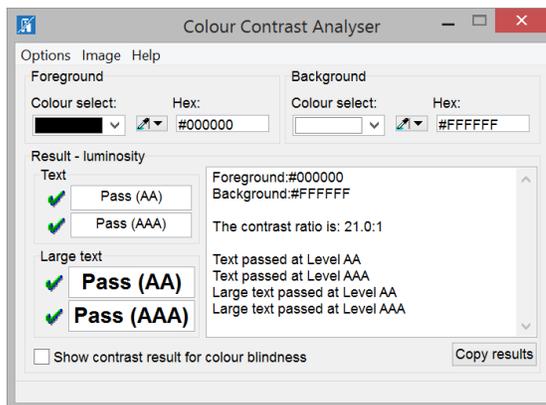
Dark text on a white background is ideal. However, if there is a desire for a different text or background color, tools are available to determine if sufficient contrast exists.

The Colour Contrast Analyser (CCA) can be found at:
<https://www.paciellogroup.com/resources/contrastanalyser/>

If CCA is installed on the computer it can be found on the program menu.

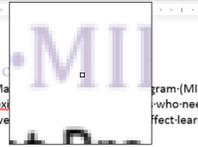
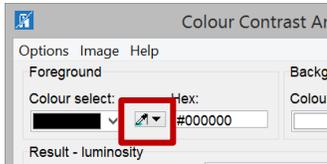


The tool allows testing of potential foreground/background color combinations to make sure they provide sufficient contrast.

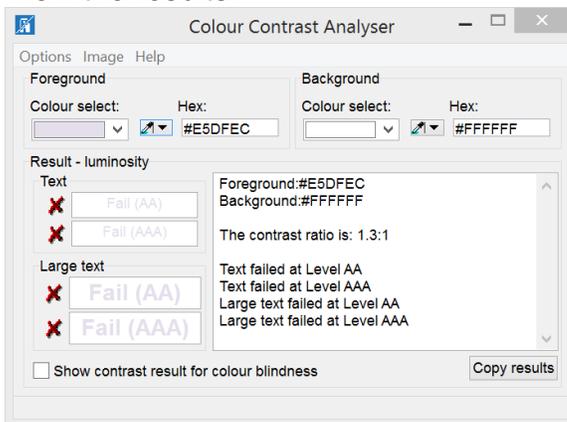


The process for testing background and text colors for the site:

1. Open the Colour Contrast Analyser.
2. Use the foreground eyedropper tool to select the text color.



3. If the background color is something other than white, use the background eyedropper tool to select the background color.
4. View the results.



5. Change the text and/or background color if the color combination fails.

Avoid Use of Color as the Only Way to Convey Meaning

There is often a desire to emphasize important text by using a different color such as red. This works well for most people without vision impairments, but it can be a challenge for those who are color blind.

The best approach is to use a method other than text color to signify meaning. However, if text color is used in this way make sure to also use an alternative method, such as adding a heading for an important note, so that those who are unable to view the change in color do not miss important information.

Remove Repeated Blank Characters

Avoid using the enter key to move text to a new page. Instead, use **Ctrl+Enter** to create a page break. Also use **Spacing After** on the **Page Layout** ribbon to add spacing after paragraphs or headings.

Use Built-in Heading Styles

Using built-in heading styles for documents that will be converted to PDF and added to the website is the most important step that can be taken to make the document accessible.

People using assistive devices such as screen readers and those limited to using a keyboard to navigate the web depend on an organized, logical reading order to navigate content.

When Microsoft Word's built-in headings are used it sets the foundation for logical and consistent navigation from one heading to the next.

When formatting such as bold, font style, italics, and color are added directly to text without using heading styles there is no way for screen readers to identify the headings in the document.

Adding Heading Styles

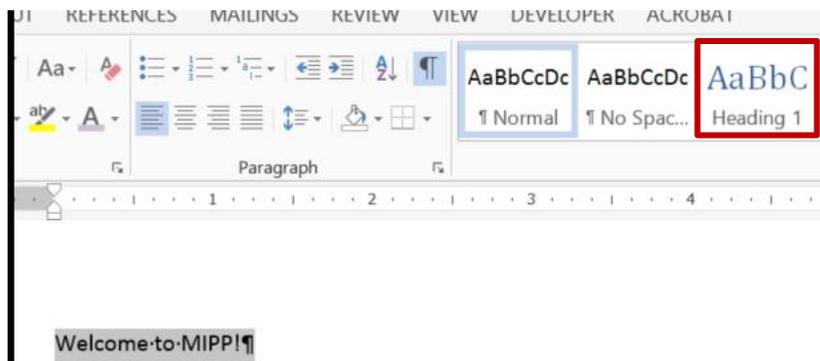
There are several heading styles available in Microsoft Word. A good strategy is to:

- Assign **Heading 1** to the title of the document.
- Assign **Heading 2** to all major headings within the document.
- Assign **Heading 3** as a subheading of Heading 2.
- Assign **Heading 4** as a subheading of Heading 3.

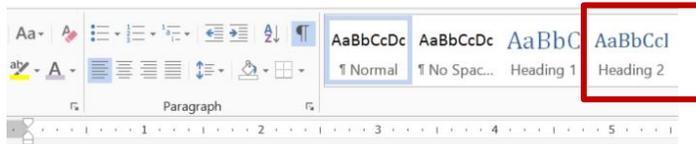
Follow the pattern above for as many heading levels as required in the document. Most documents will need no more than 4 heading levels.

The process for adding heading styles to the page:

1. Select the title of the document and select **Heading 1** from the **Home** ribbon.



2. Select each major heading and select **Heading 2** from the **Home** ribbon.



Welcome to MIPP!

Overview

The Macomb Infant Preschool Program (MIPP) serves children ranging in age from a few v approximately thirty-three months who need special education services because of a med or developmental delay that can affect learning. Learn more

3. Repeat step 2 above for all heading levels in the document.

At this point do not worry about what the heading style looks like. The styles will be modified in the following section.

Modify Heading Styles

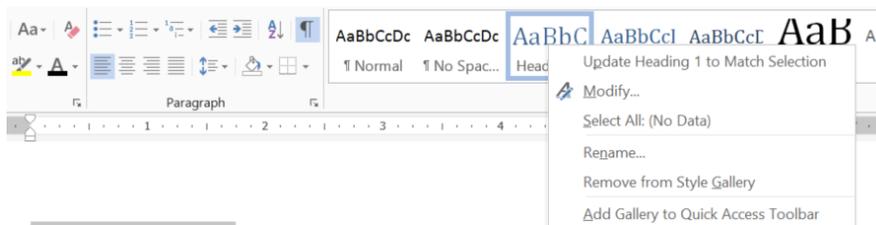
There are several ways to modify styles in a Word document to display the desired formatting.

What follows is one process to use for modifying styles:

1. Select text in the document that represents the **Heading 1** style (the title of the document).
2. Use the formatting tools on the **Home** tab to modify the selected text.

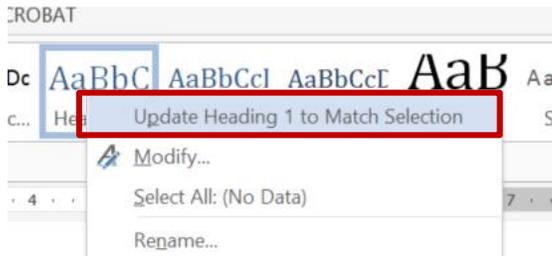
Welcome to MIPP!

3. Keep the text selected and **right-click** the **Heading 1** button on the ribbon.



Welcome to MIPP!

4. **Left-click** the first option – **Update Heading 1 to Match Selection**



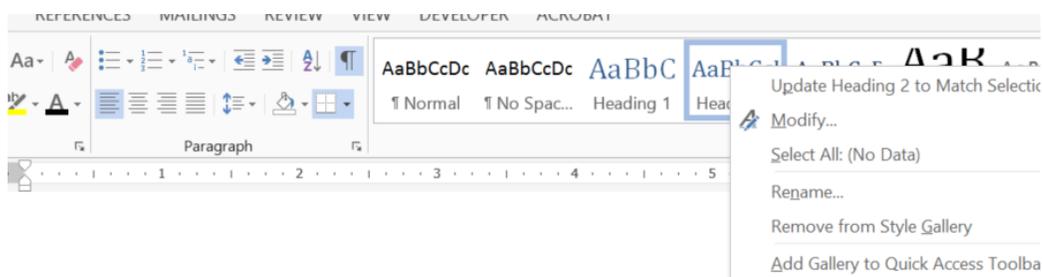
Repeat steps 1-4 for the first **Heading 2** style in the document:

1. Select text in the document that represents the **Heading 2** style (just the first heading with this style).
2. Use the formatting tools on the **Home** tab to modify the selected text.

• **Overview**

The Macomb Infant Preschool Program (MIPP) serves

3. Keep the text selected and **right-click** the **Heading 2** button on the ribbon.



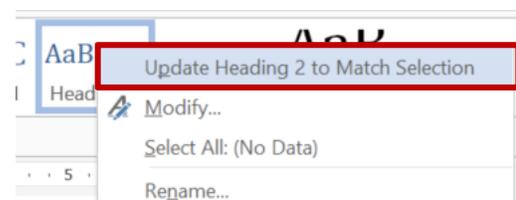
• **Welcome to MIPP!**

¶

• **Overview**

The Macomb Infant Preschool Program (MIPP) serves children ranging in age from a few weeks to approximately thirty-three months who need special education services because of a medical difficulty.

4. **Left-click** the first option – **Update Heading 2 to Match Selection**



*All of the headings with the **Heading 2** style will change to match the formatting of the first one.*

Selecting Fonts

When selecting fonts it is a good idea to use text that is no smaller than 11 or 12 point through the body of the document.

Also, electronic documents are easier to read with Sans Serif Fonts.

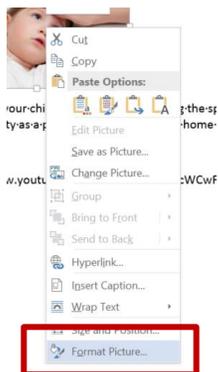
Sans Serif Font	Serif Font
	

Add Alternative Text for Images

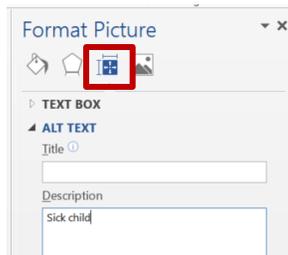
Alternative text is used by screen readers to read a description of an image that cannot be seen.

The process for adding alternative text for an image in the document is:

1. **Right-click** on the image.
2. Select **Format Picture...**



3. Select the third button in the group of icons under **Format Picture** on the right side of the screen. Add a description of the image.



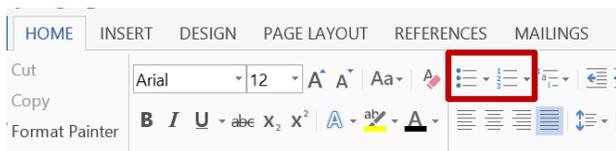
The image description should be accurate and concise. Avoid words like “image” or “picture”.

4. Use the X in the corner of the **Format Picture** panel to close it. The alt text will be saved.



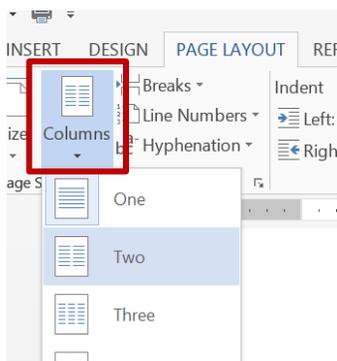
Add Lists

When adding lists in Word make sure to use the **Bullets** and **Numbering** tools on the **Home** tab.



Add Columns

When splitting the document into two or more newsletter-style columns, make sure to use the **Columns** button under the **Page Layout** tab.

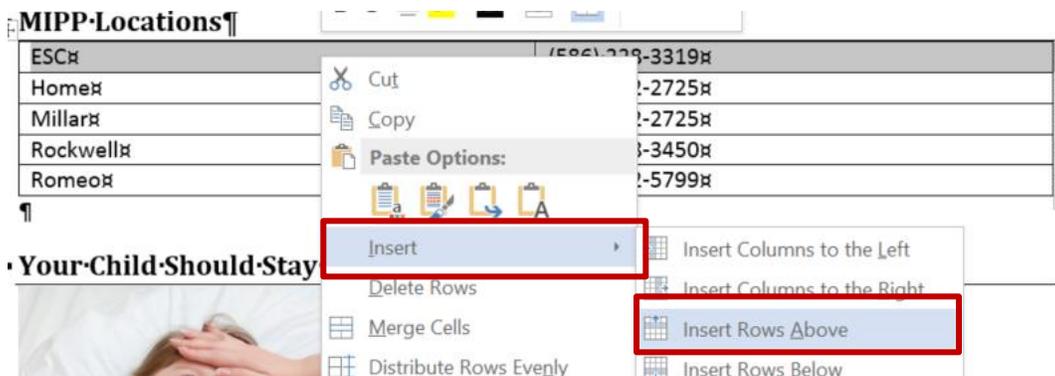


Create Accessible Tables

It is helpful to identify the first row of a Word table as a header row. This provides people using screen readers with additional information when the document is saved as a PDF file.

The process for adding a header row property to a Word table is:

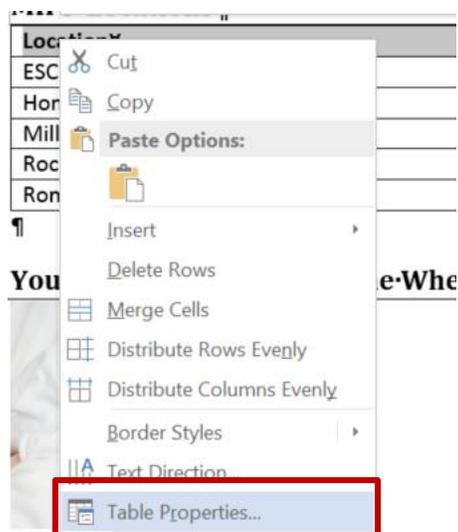
1. Add a header row to the table if there is not one provided. Select the first row, then **right-click** and select **Insert→Insert Rows Above**



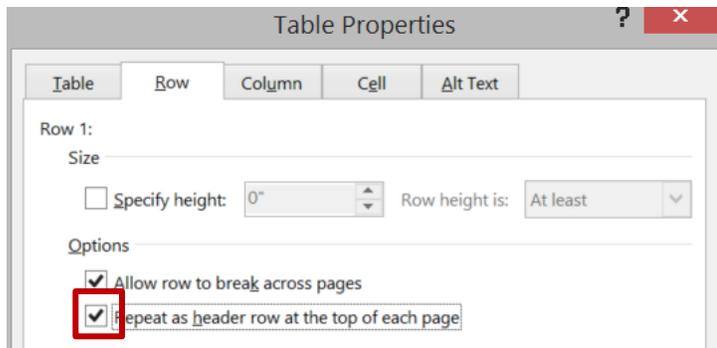
2. Add heading text for each column in the first row of the table.

Location	Phone
ESC	(586) 228-3319

3. Highlight the new first row. **Right-click** and choose **Table Properties...**

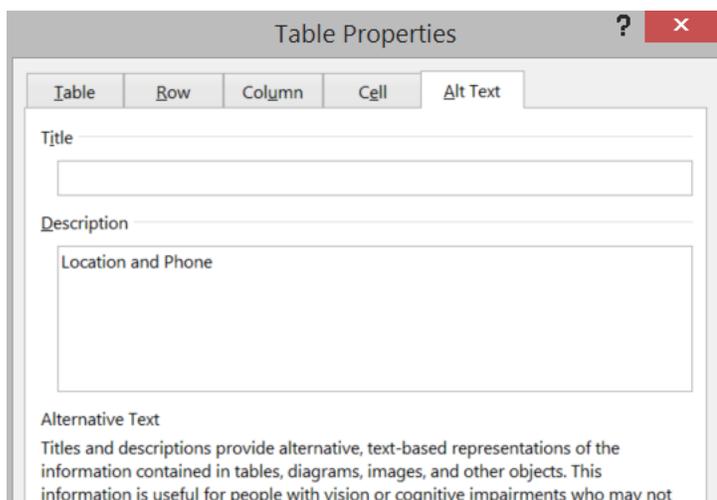


4. Select the **Row** tab and check **Repeat as header row at the top of each page**. Then click **OK**. This will mark the first row as a header row.



The process for adding alt text to a Word table is:

1. Select the **Alt Text** tab in the **Table Properties** box.
2. Type in a brief and concise description for the purpose of the table. Click **OK**.



Keeping tables simple is the best approach for helping with accessibility. Avoid splitting cells, merging cells, and nesting tables.

Create Meaningful Hyperlinks

When adding hyperlinks to the Word document make sure the text of the hyperlink is meaningful.

Often it is tempting to add the URL for the hyperlink as the text, but this is typically not descriptive enough to let people know where they will be taken when clicking on the link.

As an example, the following URL is included in the sample document and the text for the link is the URL itself:

..

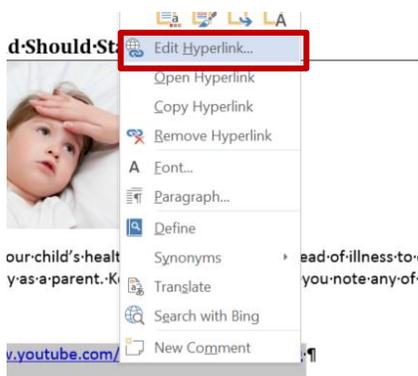
https://www.youtube.com/watch?v=hD_YqcWcFQ

The link leads to a video titled **Developmental Milestones – Infants** which would serve as more meaningful text for the link.

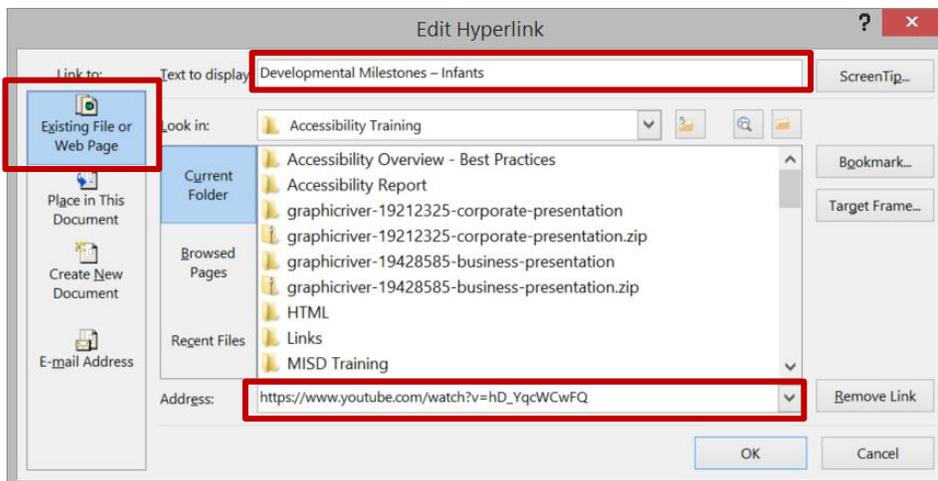
A quick way to add a hyperlink to the Word document is to type in or copy the URL to the page and hit **Enter** or the **Spacebar** to create a link.

The process for editing hyperlink text in Word is:

1. Select the existing URL or descriptive text for the hyperlink. Be exact in your selection of the text for best results. Avoid including extra spaces.
2. Right-click and choose **Edit Hyperlink...**



3. Opposite **Text to Display** add the meaningful text that should be displayed in the document. Opposite **Address** make sure the correct URL is displayed. Click **OK**.



The revised text will be displayed in the document.

[Developmental Milestones – Infants](#)

If the document will be printed it is helpful to include the URL with the text describing the link. That can be done by adding the URL in parenthesis after the meaning text.

[Developmental Milestones – Infants](#)
(https://www.youtube.com/watch?v=hD_YqcWCwFQ)

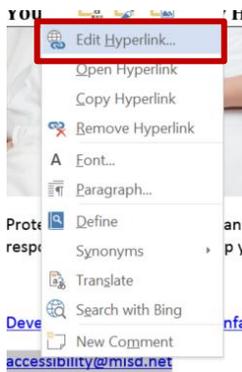
*If the URL becomes a hyperlink automatically, you can select the URL text and use the **Remove Format** button on the **Home** tab to remove the hyperlink format.* 

Add Email Addresses

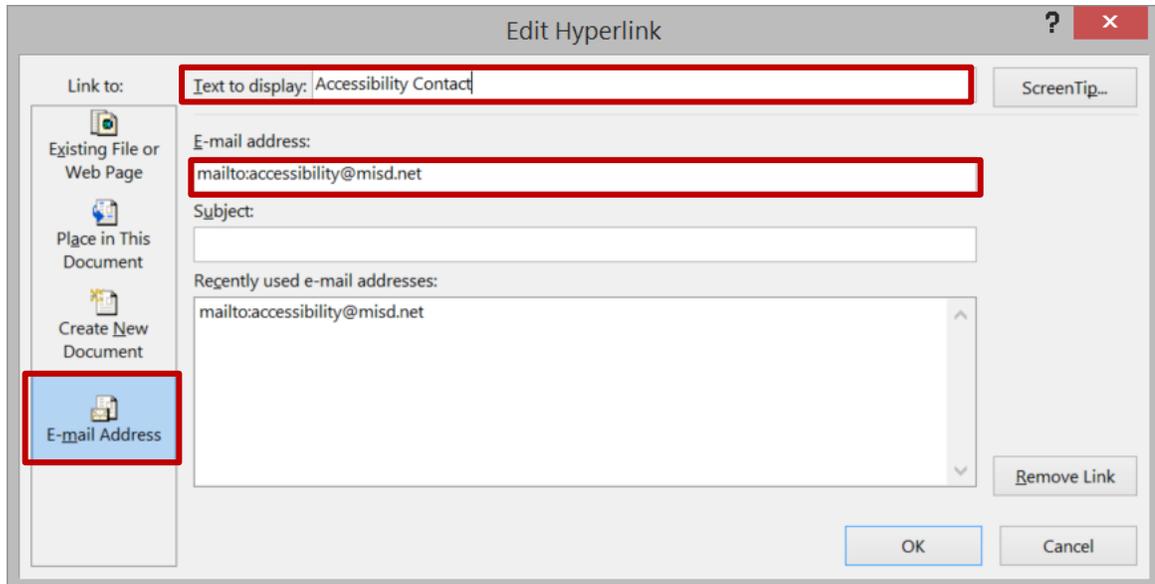
A quick way to add email addresses to the Word document is to type in an email address and hit **Enter** or the **Spacebar** to create a link.

The process for editing the email text in Word is:

1. Select the existing email in the Word document. Be exact in your selection of the text for best results. Avoid including extra spaces.
2. Right-click and choose **Edit Hyperlink...**



3. Make sure **E-mail Address** is selected on the left panel. Opposite **Text to Display** add the meaningful text that should be displayed in the document. Opposite **E-mail Address** make sure the correct email is displayed. Click **OK**.



The revised text will be displayed in the document.

[Accessibility contact](mailto:accessibility@mysd.net)

Add Document Properties

Document properties assist with accessibility and search engine optimization. Document properties include several different fields. The two fields that should always be added are:

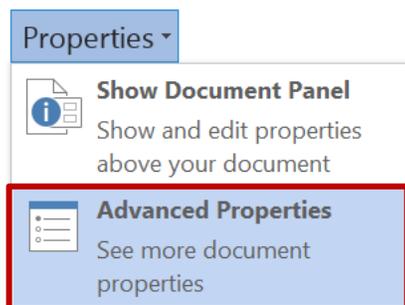
1. **Title**
2. **Author**

The process for adding document properties in Word is:

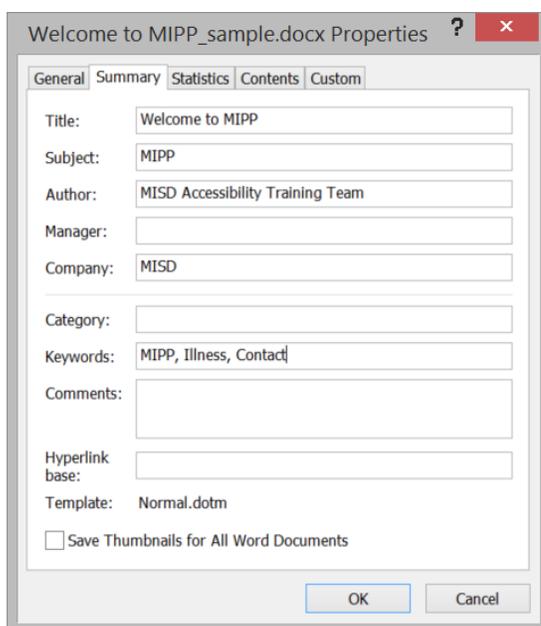
1. Select the **File** tab and choose **Info**.



2. Choose the down arrow next to the **Document Properties** heading. Then select **Advanced Properties**.



3. Select the **Summary** tab. Fill in the relevant information. Click **OK**.



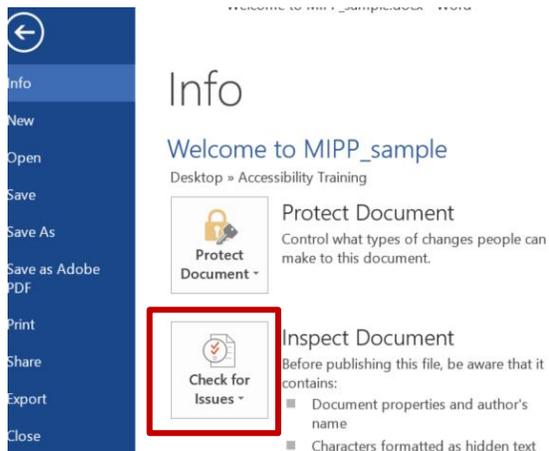
Check Document Accessibility

Microsoft Office has a built-in accessibility checker. The checker will not flag all issues, but will discover some of them.

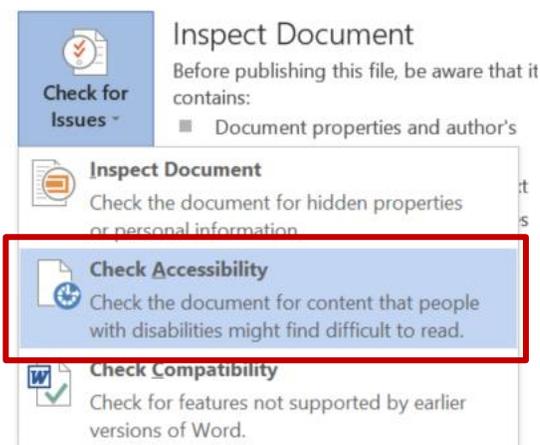
Make sure you use the accessibility checker in combination with the best practices outlined in this document to achieve optimal results.

The process for running the accessibility checker in Word is:

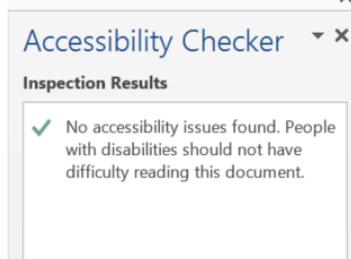
1. Select the **File** tab and choose **Check for Issues**.



2. Select **Check Accessibility**.



3. View the results and fix any remaining issues.

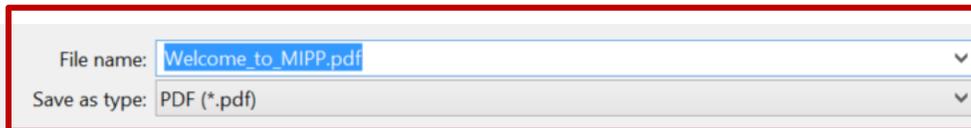


Some issues, such as color contrast, are not able to be determined using the accessibility checker. Make sure to combine best practices described in this document with the accessibility checker.

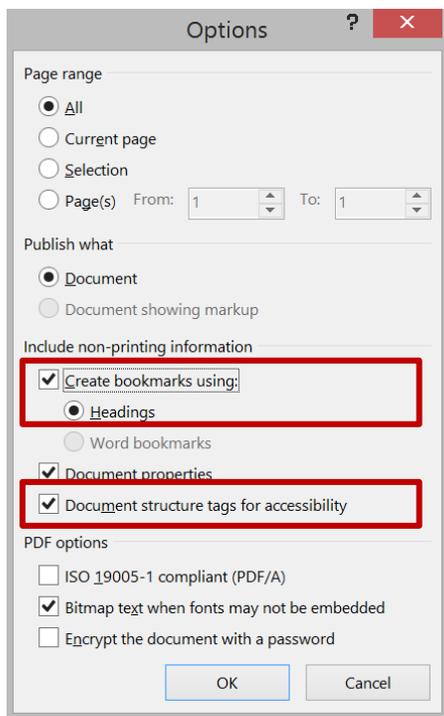
Save as PDF File

Once the Word document is accessible, it is time to save the document as a PDF file.

1. Choose **File**→**Save As**
2. Use the **Browse** button to select the location where the PDF file will be stored.
3. Opposite **File name**: be sure to use a **name without spaces**. The dash or underscore can be used to make the name more readable.



4. Opposite **Save as type**: select **PDF**.
5. Select **Options** and make sure **Document structure tags for accessibility** is selected. Also, select **Create bookmarks using: Headings**. Click **OK** and save the file.



More details for making Office documents accessible can be found in the other resources available with the training.

Chapter 4 – Accessibility in Adobe Acrobat

Overview

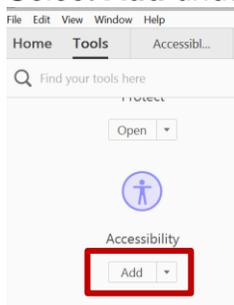
Once a document has been created as an accessible document in Word, it has met most of the requirements for being accessible as a PDF document. A few additional steps are required to complete the process.

Open File in Adobe Acrobat

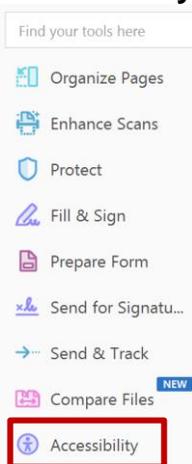
1. Open Adobe Acrobat DC.
2. Open PDF document created in Word.

Check Accessibility

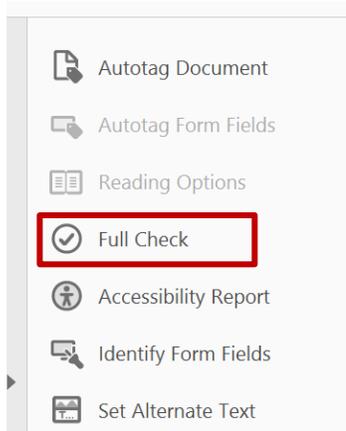
1. Select **Tools**.
2. Select **Add** under **Accessibility**.



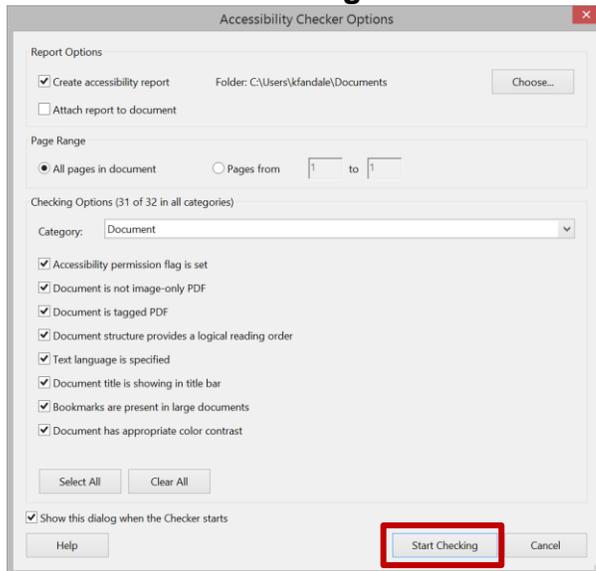
3. **Accessibility** has been added to the panel on the right side of the screen.



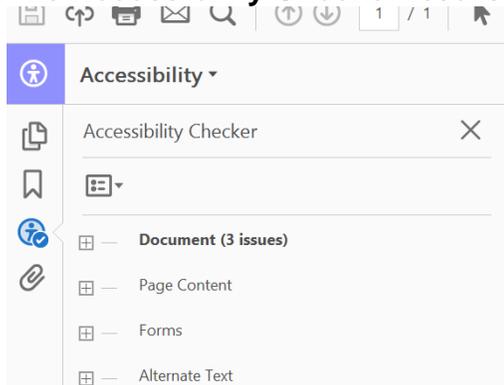
4. Click on **Accessibility** and then choose **Full Check** to run the accessibility checker.



5. Click the **Start Checking** button in the lower right corner of the box that appears.

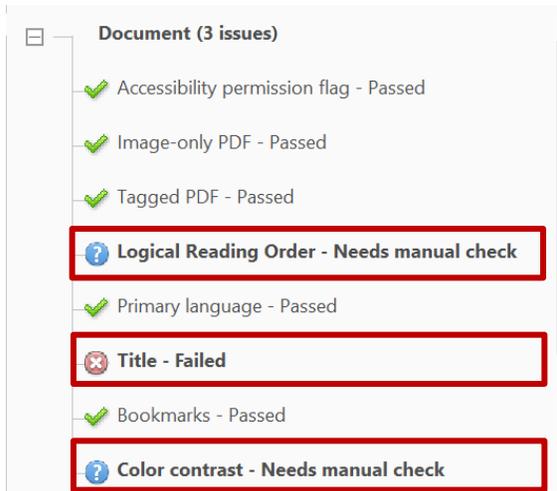


6. The **Accessibility Checker** results will appear on the left side of the screen.



Three Problems that Always Appear

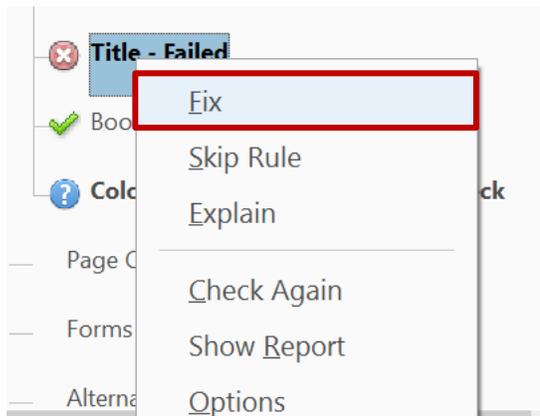
There are 3 problems that always appear in the Accessibility checker. Two are listed because they need to be manually checked. The other problem requires an easy fix.



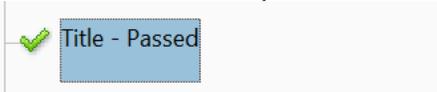
Fix Title Failed Error

This error is caused by some challenges with consistency between Microsoft Word and Adobe Acrobat. However, there is an easy fix.

1. Right-click on **Title – Failed** and select **Fix**.



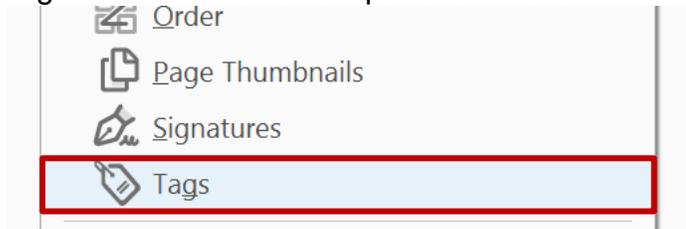
2. If the title and author were added in **Microsoft Word** when the document was created, then the problem will be automatically resolved and you will see:



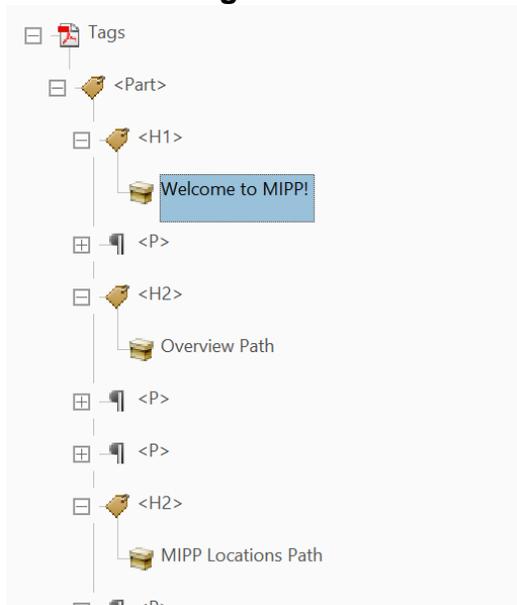
Check Logical Reading Order

Most documents come over with a logical reading order. However, for some flyers the reading order may need to be revised.

1. Right-click on the narrow panel on the left and select **Tags**.



2. Click on the **Tags** button on the left to view the tag order.



3. If necessary, the items in the tag panel can be moved around to change the reading order. This will not change the order of the items in the printed document.

If you checked the color contrast while creating or editing the document in Microsoft Word, you will not need to check the color contrast again in the PDF document.

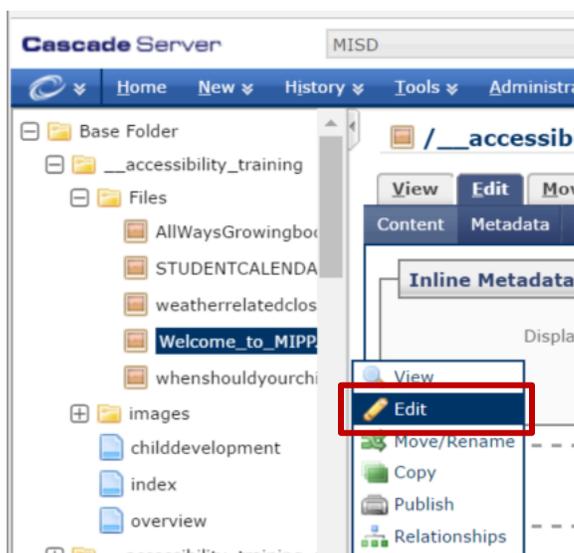
Chapter 5 – Replace PDF Files in Cascade

Overview

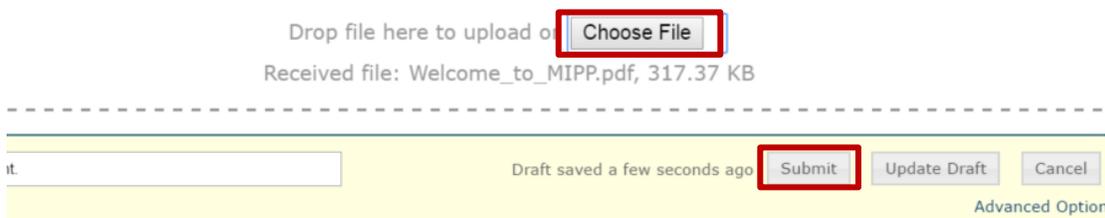
Once a PDF file has been made accessible, it is often necessary to replace the original PDF with the newly accessible version of the file.

Process to Replace PDF Files

1. In Cascade Server select the PDF file that needs to be replaced.
2. Choose the arrow to the right of the file name and select **Edit**.



3. Select the new file and click **Submit**.



Whenever possible it is best to use the same file name with the new PDF file as you had with the original so that links on your web pages do not need to be changed.