Portable Document Format (PDF) Basic Testing Guide

The testing guidance in this release is for Adobe Acrobat Pro DC (32-bit) Continuous Release | Version 2024.002.20687. If the screens shown in the guide do not match your product interface, Adobe recommends visiting <u>help for your current experience</u> to identify the version in use. Acrobat keyboard navigation shortcuts for current and previous releases can be found at <u>Keyboard shortcuts for Adobe</u> <u>Acrobat</u>. To enable single-key shortcuts, open the Preferences dialog box (Edit > Preferences), and under General > Basic Tools enable the Use single-key accelerators to access tools option.

Figure 1 – Single-key shortcuts preferences

Freierences		
Categories:	Basic Tools	
Commenting	Use single-key accelerators to access tools	
Documents Full Screen	Create links from URLs	
General	Make Hand tool select text & images	
Page Display	Make Hand tool read articles	

Some tests can only be performed using a mouse or pointing device. Please refer to your assistive technology guide for quick navigation keys to help moving through the tag or contact structures if you are unable to use a mouse or other pointing device.

Some tests in this guide require running the built-in **Accessibility Check**. For quick access to the accessibility tools used in this guide, add a shortcut to the **Accessibility** group in the **Tools/Task** pane. To create the shortcut, select the **Tools** tab > **Protect & Standardize** group > **Accessibility** > **Add**. The accessibility check is a system run check that requires manual/visual checks to verify:

- The tag structure aligns with the content structure, logical reading order, and designated tab order.
- Color contrast
- Accuracy of alternative text, and
- Link destinations



Figure 2 – Tools/Task pane with the Accessibility group tools added for quick access

Preconditions

A. Is the PDF a PDF Portfolio or does the PDF have file attachments?

How to test A

PDF Portfolio

A PDF Portfolio is a collection of folders and files assembled into an integrated PDF unit. The files in a portfolio may originate from many different applications, will retain their original format, can be previewed in Acrobat Pro, and will open in the source software, if available on the local system.

Figure 3 – Sample PDF Portfolio containing folder and files in various formats, displaying preview for .html file.



Instruction A.1: Open each individual document/file included in the portfolio and test with the corresponding test process for that file format.

Test A.1: Was each file tested with the corresponding test process, and did the file pass? If not, the PDF Portfolio fails this test.

PDF Attachments

PDF Attachments are files saved within the PDF that are related/relevant to the PDF's main content. Attachments may be in various formats.

Instruction A.2: Open the PDF and activate the **View** menu > **Show/Hide** > **Navigation Panes** > **Attachments**. Select and open each attachment separately and test with the corresponding test process.





Test A.2: Were all attachments tested with the corresponding test process, and did they pass? If not, the PDF fails this test.

B. Was the PDF generated from Adobe Designer or LiveCycle Designer?

PDF fillable forms authored with Adobe LifeCycle Designer, or Designer cannot be tested or remediated for accessibility with Acrobat Pro. By default, all Designer PDF Forms are edit protected.

How to test B

Instruction B: Open the File menu > Properties > Document Properties and select the Description tab (or Ctrl+D).

Figure 5: Document Properties Description tab indicating Adobe LiveCycle Designer / Designer as producing application

Document Properties	Document Properties
Description Security Fonts Initial View Custom Advanced	Description Security Fonts Initial View Custom Advanced
Description	Description
File: FormSample.pdf	File: FormSample.pdf
Title: Sample Form for accessibility testing	Title: Sample Form for accessibility testing
Author: AED COP	Author: AED COP
Subject:	Subject:
Keywords:	Keywords:
Created: 7/13/2015 8:27:05 AM	Created: 2/6/2024 9:39:33 AM
Modified: 9/23/2015 2:28:12 PM	Modified: 2/6/2024 9:44:59 AM
Application: Adobe LiveCycle Designer ES 9.0	Application: Designer 6.2
Advanced	Advanced
PDF Producer: Adobe LiveCycle Designer ES 9.0	PDF Producer: Designer 6.2
PDF Version: 1.7 (Acrobat 8.x)	PDF Version: 1.7 (Acrobat 8.x)

Test B: Do the properties for **Application:** and **PDF Producer:** display **Adobe LiveCycle Designer** or **Designer**? If so, the form cannot be tested using Acrobat Pro.

C. Does the PDF contain programming scripts?

Adding programming (Scripts) to a document turns it into a software application. Applications should be tested using software testing methods. The Department of Homeland Security's (DHS) <u>Section 508</u> <u>Trusted Tester Conformance Test Process</u> provides a code-inspection based test approach.

How to test C

Instruction C: Activate the Accessibility Checker (Tools > Accessibility > Add > Accessibility Check > Start Checking). Expand the Page Content category to view issues.



Figure 6: Scripts – Needs manual check accessibility check results

Test C: Does **Scripts – Needs manual check** display under the **Page Content** category? If so, you must test the PDF with the DHS's <u>Section 508 Trusted Tester Conformance Test Process</u>.

D. Is the PDF tagged?

Documents must be tagged to be accessible to assistive technology users.

How to test D

Instruction D: Activate the **File** menu > **Properties** > **Description** tab to open the **Document Properties** window.

Document Prop	perties	
Description Seco	urity Fonts Initial View Custom Advanced	
Description		
File:	AccessibleElectronicDocuments.pdf	
Title:	PowerPoint Checklist	
Author:	AED COP	
Subject:	Content Update	
Keywords:	Basic Testing and Authoring Guidance	-
Created:	3/25/2024 9:52:48 AM Additional Metadata	1
Modified:	3/25/2024 9:52:53 AM	
Application:	Acrobat PDFMaker 24 for PowerPoint	
Advanced		
PDF Produ	cer: Adobe PDF Library 24.1.124	
PDF Versi	ion: 1.4 (Acrobat 5.x)	
Locati	ion: C:\Users\Desktop\	
File S	Size: 1.17 MB (1,231,497 Bytes)	
Page S	Size: 13.34 x 7.50 in Number of Pages: 13	
Tagged P	PDF: Yes Fast Web View: Yes	
Help	OK Cance	

Figure 7: Document Properties showing Tagged PDF: Yes

Test D: Does **Tagged PDF** display **Yes** under the **Advanced** section in the **Document Properties** > **Description** tab? If not, the PDF fails this test.

E. Is the PDF made up of images, scanned pages or does it contain scanned or images of text pages?

How to test E

All or part of a PDF may contain pages that are made up of an image, or that may have been scanned into a PDF. Images of text, or scanned pages content is not apparent to assistive technology users. Optical character recognition (OCR) software will extract text from a scanned paper document or image file, and convert it to editable text, that can be tagged and made accessible for assistive technology users. **Note:** While testing with Acrobat, you must uncheck the options under **Edit** > **Preferences** > **Accessibility** > **Other Accessibility Options** to receive alerts for scanned/image only pages. In the **Scanned Page Alert** window **DO NOT check** Do not show this message again.

Figure 8: Other Accessibility Options preferences

Other Accessibility Options	
Use document structure for tab order when no explicit tab order is specified	
Enable assistive technology support	
Always display the keyboard selection cursor	
Always use the system selection color	
Show Portfolios in Files mode	
Enable cloud-based auto-tagging for accessibility	

Instruction E.1: Scanned Page Alert displays when you open the PDF.

Figure 9: Scanned Page Alert window

Scanned Page Alert	×
This page contains only an image. Would you like to run text recognition to make to text on this page accessible?	the
Do not show this message again	
Yes No	

Test E.1: Does the PDF display a Scanned Page Alert when opened? If yes, the PDF fails this test.

Instruction E.2: Activate the Accessibility Check (Tools > Accessibility > Accessibility Check > set the category to Documents > Start Checking). Expand the Document testing results.

Figur	re 10 - Failed accessibility check results for image only	PDF
	Accessibility Checker	
	:	
	✓ Document (6 issues)	
	Accessibility permission flag - Passed	
	🔯 Image-only PDF - Failed	
	🔯 Tagged PDF - Failed	

Test E.2: Does the **Accessibility Checker** flag **Image-only PDF – Failed** as an issue? If yes, the PDF fails this test.

Instruction E.3: The PDF may contain scanned pages or inserted pages that are untagged. Activate the Accessibility Check (Tools > Accessibility Check > Documents > Start Checking). Expand the Document category in the Accessibility Checker pane to display issues.

[1.	
	Accessibility Checker
	:
	✓ Document (6 issues)
	Accessibility permission flag - Passed
	Image-only PDF - Failed
	🔯 Tagged PDF - Failed
	Optical Reading Order - Needs manus

Figure 11: Failed accessibility check results for tagged PDF

Test E.3: Does **Tagged PDF – Failed** display under the Document category? If yes, the PDF fails this test

F. Does the PDF include tracked changes or have added notes/comments?

PDFs may contain tracked changes markups and notes/comments either imported from the source document or added directly in the PDF.

Tracked changes markups from source documents, except comments, will not convert to PDF using the **Save as PDF** feature. All tracked changes are accepted as final and comments are converted to untagged annotations that must be manually tagged and added to the tag structure.

	G ② A Ⅲ ⊕ d ⊆ ⊡ Q Gyne Dourent	JS Smart, Jane
B. ■ 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Report put accessor from Cyper Document	
🕞 🖂 🌆 / Name of State		
🕞 🖂 🌆 / Name of State	ssibility Report	Replace screen capture
Basel could		Tip: Press Ctrl+Enter to post.
	rgerinden: Alternation Franche Polytoneses = Marcha Balag (
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	ana Anta 3 1997 - 1997	
fundingulus 300795minguput Annukhputgutanis Detaile	ad Report	
	Name Name New April Mandralling Source of the second flag second mark flag and the set New April Name Decounting and participation of the set New April Name Decounting and participation of the set New April	
Land tool	Color: Needs want (net) control to private a registry of the private and Paralel To de registry of the private terms to convert this is interact a clinic law frame to convert a this is interact a clinic barriero frame to convert a clinic barriero	
lagged content - Passed	He is the FVF AFVF FVF LINUS OF UNES THE FVF HARE THE ALL MINISTRE	
		Smart, Jane 9:50 AM
Caragged annotations - Failed	PDF Purificalie A PDF Purification is a collection of fulders and files assembled into an integrated PDF unit: accelerations, will intern their original terms, can be anywhere in Accelerations, and the second second second second second	
Tagged annotations - Failed		The files can originate in efforcest opening the source settivers, Flocally

Figure 12 - No visible tracked changes in Save as PDF output - Notes are untagged annotations

Exporting to a **PDF/XPS** file retains the visual appearance of the tracked changes. All text is converted to tagged content, including notes/comments. Changes will display visually but the tagged content includes deletions, insertions, moved and other text changes making the tagged content unintelligible. Notes/comments are tagged as **Annotation**, strikethrough, underlines for insertions, moves, etc. may be tagged as figures or paths.

Tracked changes markups added with Acrobat Pro must be explained in the associated markup's comment window, so assistive technology users may have a logical explanation of what was deleted, added, moved, or changed.

How to test F

Instruction F.1: To check for untagged annotations (notes/comments) in a tracked changes PDF, activate the Accessibility Check (Tools > Accessibility Check > Documents > Start Checking). Expand the Page Content category in the Accessibility Checker pane to display issues.

Acc	essibility Checker	
:=	•	
>	Document (3 issues)	
\sim	Page Content (1 issue)	
	Tagged content Passed	
>	🔯 Tagged annotations - Failed	
Tab order - Passed		
	Character encoding - Passed	

Figure 13: Accessibility Checker result for Tagged annotations – Failed

Test F.1: Does **Tagged annotations - Failed** display under the **Page Content** category? If yes, the PDF fails this test.

Instruction F.2: A PDF that has visual track changes originating from a source document (PDF/XPS export) is not accessible to assistive technology users.



A PDF Portfolios areis a collections of folde	Face Notifier Proposition Notifier Image: Section of the	
> ¶ <p></p>	Preconditions	
✓ ¶ <p></p>	A. Is the PDF a PDF Portfolio or does the PDF have file attachments? How to test <u>A</u>	
₩ ₩ Path	PDF Portfolio APDF Portfolios energia_collections of olders and files many different documents combined assembled into an integrated PDF unit. Interfiles carcompany in uniterent auxicitations, will and PDF retain their original format, can be previewed in Acrobat Pro, and will.	
😝 PathPathPath 🔍	open in the source software, if locally available, (Figure 1). Figure 24-, Somole PDF Portfolio containing folder and files in various formats, displaving provider for html file, PDF Portfolio	
✓ 🧳 <annotation></annotation>	Image Mat Monthlaw, <	Commented [SJ1]: Replace screen capture
✓ ¶ <p></p>		
😝 Commented [SJ1]: Replace screen captur		

Test F.2: Does the PDF have visible tracked changes, and is the tagged content inarticulate? If yes, the PDF fails this test

Instruction F.3: PDF text markups must have comments explaining the action and content change. To check markup comments, have accurate descriptions for the action and content change go to **Tools** menu> **Share & Review** section > **Comment > Open** to access the **Comments** pane. Verify the comments for each tracked change have an account of the action and what content is affected verbatim.



Figure 15: Tracked changes in PDF with comments reflecting the action and affected text

Test F.3: Do all comments associated with the track changes reflect the action and content change? If not, the PDF fails this test.

Document Properties

1. Does the PDF display a descriptive title when opened?

How to test 1

A descriptive title identifies the document or its purpose and helps users identify and find documents.

Instruction 1.1: Go to the **Description** tab in the **Document Properties** window (**File > Properties > Description**).

Figure 16: Title field in the Document Properties with a descriptive title

Ocument Properties	
Description Seco	urity Fonts Initial View Custom Advanced
Description	
File:	AccessibleElectronicDocuments.pdf
Title:	PowerPoint Accessibility Checklist - Basic Authoring and Testing Guide
Author:	AED COP
Subject:	508 Guidance
Keywords:	Basic Testing and Authoring Guidance, 508, PowerPoint

Test 1.1: Does the **Title** field have a descriptive title identifying the document? If not, the PDF fails this test.

Instruction 1.2: Accessibility Check will automatically fail Document > Title if the initial view is set to display File Name. Go to File > Properties > Initial View tab and verify Window Options is set to Show: Document Title.

Description Security Fonts Initial View Custom Advanced Layout and Magnification Navigation tab: Page Only Page layout: Single Page Magnification: Default Open to page: 1 of 13 Window Options Resize window to initial page Center window on screen Open in Full Screen mode Show: Document Title	J	
Layout and Magnification Navigation tab: Page Only Page layout: Single Page Magnification: Default Open to page: 1 of 13 Window Options Resize window to initial page Center window on screen Open in Full Screen mode	Document Properties	
Navigation tab: Page Only Page layout: Single Page Magnification: Default Open to page: 1 Open to page: 1 Mindow Options 6 Resize window to initial page Center window on screen Open in Full Screen mode 0	Description Security Fonts Initial View Custom Advanced	
Page layout: Single Page Magnification: Default Open to page: 1 of 13 Window Options Resize window to initial page Center window on screen Open in Full Screen mode	Layout and Magnification	
Magnification: Default Open to page: 1 of 13 Window Options Resize window to initial page Center window on screen Open in Full Screen mode	Navigation tab: Page Only v	
Open to page: 1 of 13 Window Options Resize window to initial page Center window on screen Open in Full Screen mode	Page layout: Single Page 🗸 🗸	
Window Options Resize window to initial page Center window on screen Open in Full Screen mode	Magnification: Default ~	
Resize window to initial page Center window on screen Open in Full Screen mode	Open to page: 1 of 13	
□ Center window on screen □ Open in Full Screen mode	Window Options	
Open in Full Screen mode	Resize window to initial page	
	Center window on screen	
Show: Document Title	Open in Full Screen mode	
	Show: Document Title ~	

Figure 17: Initial View set to Show: Document Title

Test 1.2: Does the **Initial View** tab display **Document Title** in the **Window Options** > **Show**: field? If not, the PDF fails this test.

2. Is Assistive Technology access enabled?

How to test 2

Security settings are useful to safeguard the integrity and unauthorized manipulation of documents. However, these settings may also block access to assistive technology users, unless the **Content copying for Accessibility** option in the **Document Properties** > **Security** tab is enabled.

Instruction 2: Go to **File > Properties** to open the **Document Properties > Security** tab and verify the **Content Copying for Accessibility** option is set to **Allowed**.

Test 2: Does Content Copying for Accessibility display Allowed? If not, the PDF fails this test.

Document Properties							
D	escription	Security	Fonts	Initial View	v Custom	Adva	anced
Ľ	Document	Security					
				Method res ity Method			e done to the document. To
	Se	curity Met	hod:	assword Se	curity		
	Can	be Openeo	dby: A	crobat 7.0 a	and later		
	All cont	tents of th	e docur	nent are en	crypted but	sear	ch engines can access the do
E	Document	Restrictio	ns Sum	mary			
Printing: Changing the Document: Document Assembly:				Printing:	Allowed		
				Document:	Not Allow	ed	
				Assembly:	Not Allow	ed	
١.	Content Copying:				Not Allow	ed	
	Cont	ent Copyir	ng for A	ccessibility:	Allowed		
1			Page	Extraction:	Not Allow	ed	
			Со	mmenting:	Allowed		
		Fi	lling of	form fields:	Allowed		
				Signing:	Allowed		
		Creation	of Temp	late Pages:	Not Allow	ed	
	* This	PDF form	restricts	some oper	ations.		

Figure 18: Document Restrictions Summary with Content Copying for Accessibility enabled

3. Is the appropriate language assigned?

How to test 3

Document Language

Languages other than the system defined default language in PDFs must be identified under the **Document Properties > Advanced** tab **> Language** option.

Note: If the language is not available from the drop-down menu, you can type it in the language field

Instruction 3.1: Go to File > Properties > Document Properties > Advanced tab > Reading Options > Language and verify the PDF language is set to the corresponding document language.

Figure 19: Document Properties for Language Reading Options set to Greek

Description Security Fonts Initial View Custom Advanced		
PDF Settings Base URL:		
Search Index	Browse_	Clear
Trapped: Unknown v		
Accessibility		
PDF/UA Compliance: None 🔍		
Print Dialog Presets		
Page Scaling: Default 🗠		
DupLexMode: Simplex ~		
Paper Source by Page Size:		
Print Page Range:		
Number of Copies: Default		
Reading Options		
Binding: Left Edge 🗸		
Language: Greek ~		
rotected Mode: Off		
Help	OK	Cancel

Test 3.1: Does the **Language** field under the **Document Properties** > **Advanced** tab display the corresponding document language? If not, the PDF fails this test.

Sections that contain text in languages other than the default document language

When the language of a paragraph, or part of a paragraph, differs from the document language, we must identify that language so screen reader users can hear the information pronounced correctly.

Instruction 3.2: Identify any sections in the document where the content text differs from the default document language. Exclude proper names/titles, technical terms, or commonly used foreign words. Select the text in the language that differs from the document language. Open the Accessibility Tags pane (View > Show/Hide > Navigation Panes > Accessibility Tags). Find and select the corresponding tag (Accessibility tags pane > Options menu > Find Tag from Selection). With the tag selected, open the Object Properties window (Alt + Enter > Content tab > Language).

Test 3.2: Does the Language field display the selection's language or a letter code for the <u>representation of the language name?</u> If not, the PDF fails the test.



Figure 20 - Examples of Polish identified as language in Tag Properties using full name or two letter code (pl)

Accessibility Tags

4. Do the accessibility tags follow the visual/logical reading order of the document?

How to test 4

Assistive technology users rely on tags to identify and access the document's content. All meaningful content must correspond to a tag, and the order of the tags must follow the logical or visual layout of the document.

Note: This is a manual check that requires the use of the **Accessibility tags** pane and the **Reading Order** pane or the use of assistive technology to read through the document content.

E		l							
L	View E	Sign Plug-Ins Window	Help	-					
		Rotate <u>V</u> iew	+						
	<u>۱</u>	Page Navigation	+						
		Page Display	÷	L					
		Zoom	+						
		Tools	÷						
		<u>S</u> how/Hide	•	F	Navigation Panes	•	n n	Accessibility tags	
1		Display Theme	+	~	Tools Pane	Shift+F4	-0	🕽 Artides	
		Dis <u>p</u> lay Size	+		Toolbar Items	+	C	Attach <u>m</u> ents	
		Enable new Acrobat			Page Controls	•	L	Bookmarks	
				~	Menu Bar	F9		Content	
	1	Rea <u>d</u> Mode	Ctrl+H	-	During a light sta		0	Destinations	
	_	Eull Screen Mode	Ctrl+L		Button Labels		\$	≩ <u>L</u> ayers	
	FP	Tracker			Rulers & Grids	•	2	Model Tree	
				L	Cursor Coordinates			은 Order	
		Read Out Loud	•]ı	Page Thumbnails	
		<u>C</u> ompare Files					-	Signatures	
								Show Navigation Pane	F4
								Reset Panes	

Figure 21: Path to Accessibility Tags pane using the View menu

Instruction 4: Open the Accessibility tags pane (View menu > Show/Hide > Navigation Panes > Accessibility tags). Expand the Accessibility tags Options menu and select the Highlight Content option. Reopen the Accessibility tags Options menu and select the Reading Order option or type x to open the Reading Order pane. In the Reading Order pane enable the Show page content groups checkbox and select the Page content order radio button. In the Accessibility tags pane, expand the Tags tree to show all tags. Use the keyboard's down arrow key to navigate through the tags. Verify all meaningful content on the page is enclosed in a content structure container, and that the selected tag in the Tags tree corresponds to the highlighted numbered reading order in the document content.

\frown	New Tag Autotag document Cut	Reading Order Draw a rectangle around the content then click one of the button's below:
Accessibility tags	Paste Paste Child	Text/Paragraph Figure
Accessioning tags	Delete Tag	Form Field Figure/Caption
	Delete Empty Tags	Heading 1 Heading 4 Table
	Destruction (Heading 2 Heading 5 Cell
Coptions /	Reading Order (<u>x</u>)	Heading 3 Heading 6 Formula
	lable Editor (g)	Reference (q) Note (z) Background/Artifact
	Find Tag from Selection Create Tag from Selection Eind	Table Editor
	Change Tag to Artifact	Page content order
	Copy Contents to Clipboard	Structure types
	Copy contents to Cipgoard	Show table cells
	Edit Class Map	Display like elements in a single block
	Edit Role Map	Show tables and figures
	Tag Annotations	Clear Page Structure Show Order Panel
	✓ Document is Tagged PDF	Help Close
	Show in Content Panel	
	✓ <u>H</u> ighlight Content	
	Sho <u>w</u> Metadata	
	Properties	

Figure 23 - Tag order in the Accessibility tags tree matches reading order of page content



Test 4: Do all accessibility tags correspond to the numbered reading order of the document content? If not, the PDF fails this test.

5. Is all decorative content marked as an artifact?

How to test 5

Decorative content, such as ornamental, trivial, or redundant objects, images, and text, must be marked as artifact so that it can be ignored/skipped by assistive technology users.

Instruction 5: Open the Accessibility tags pane (View menu > Show/Hide > Navigation Panes > Accessibility tags). Expand the Accessibility tags Options menu and select Find... to open the Find

Element window. Select **Artifacts** in the **Find:** field, enable **Search Page**, or **Search Document** radio button. Select **Find > Find Next** to highlight and move through all artifacted elements in the document.

Accessibility tag	New Tag Autotag document Cut Paste Paşte Child Delete Tag Delete Empty Tags Reading Order (x) Table Editor (g)	Find Element
	Find Tag from Selection Create Tag from Selection Find	Find Element × Find: Artifacts v
	Change Tag to Artifact Copy Contents to Clip <u>b</u> oard Edit Class Map	Type: Container © Search Page O Search Document Find Next Tag Element Close
	Edit Role Map Tag Annotations Document is Tagged PDF	
	Show in <u>Content Panel</u> Apply Role <u>Mapping to Tags</u> ✓ <u>Highlight Content</u> Sho <u>w</u> Metadata <u>Properties</u>	

Figure 24: Path to finding Artifacts in a PDF

Test: Is all ornamental, trivial, or redundant content and objects marked/identified as artifacts? If not, the PDF fails the test.

6. Is vital information in headers, footers, and watermarks tagged?

How to test 6

Vital information in the source document's header or footer, and watermarks (Respond by X Date, CONFIDENTIAL, or Do Not Distribute, etc.) will not be converted to tagged content in a PDF. To ensure the vital information is discoverable by assistive technology users, the untagged vital content must be manually tagged, and placed first in the reading order of the tag tree, or at the beginning of the related section.

Note: this test is not necessary, if the content in the headers and footers is redundant, repeated, or decorative (i.e., page numbers, running headers or footers)

Instruction 6: Locate vital information at the beginning of the document or a section, at the top or bottom of a page, or in the form of a watermark. In the Accessibility tags pane (View menu > Show/Hide > Navigation Panes > Accessibility tags). Expand the Accessibility tags Options menu and select the Highlight Content option. Highlight the vital information and expand the Accessibility tags Options menu and select Find Tag from Selection. Figure 25: Example of vital information in a footer tagged and placed at the top of the tag tree



Test 6: Is the vital information in the header, footer and/or watermark tagged, and placed at the beginning of the tag tree, or the related section? If not, the PDF fails this test.

7. Are all headings in the document tagged with heading tags?

How to test 7

Assistive technology users will not have the ability to easily find and navigate content from text that only visually appears to be a heading (bold, large text, underline, etc.). All headings must be tagged with a heading tag (<H1>, <H2>, <H3>, <H4>, <H5> or <H6>).

Note 1: All headings in source documents must be programmatically identified with an assigned heading level, either by using heading styles or mapping to a standard heading tag.

Note 2: Most short documents (1 to 2 pages) may not contain headings, and these tests may not apply.

Instruction 7.1: Open the Accessibility tags pane (View menu > Show/Hide > Navigation Panes > Accessibility tags). In the Accessibility tags pane, expand the Tags tree to show all tags. Check the tag tree for heading tags. If the tag tree doesn't have heading tags, check the content for any text that visually appears to be a heading (bold, large text, underline, etc.), and select the text. Expand the Accessibility tags Options menu and select Find Tag from Selection. The selected tag should have a heading tag (H1 through H6).



Figure 26: Heading tagged as text (paragraph)

Test 7.1: Are all visually apparent headings in the document tagged with a corresponding H1 through H6 tag? If not, the PDF fails the test.

Instruction 7.2: Locate any nonstandard PDF heading tags (e.g. <Title>, <H_1>, <Section>; <Heading3>). Check the appropriate mapping, by opening the **Role Map** (Accessibility tags > Options menu > Edit Role Map). In the **Role Map** window expand **Document Roles** to check mappings correspond to a standard heading tag.

	5	
A	ccessibility tags	×
E	Dptions	Role Map
~	Tags Story>	Path: Document Roles Type: Role Map
	> 🧳 <pub_title></pub_title>	Document Roles /Article /Art
<u>N</u> ew Tag Autotag document	> <	/Header1 /H1 /Header2 /H2
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Reading Order (<u>x</u>)	> 🧳 <paragraph></paragraph>	/Story /Document /_1st_bullet /LI
Eind	> 🧳 <paragraph></paragraph>	/paragraph /P
Edit Class Map	> 🧳 <sectionheader></sectionheader>	
Edit Role Map		Change Item Delete Item New Item
Tag Annotations	> 🐗 <lbl></lbl>	A Changes to a role affect all elements referencing the role.
	> < <lbody> > < 1st_bullet></lbody>	Options OK Cancel

Figure 27: Role Map Pane

Test 7.2: Are all non-standard heading tags mapped to a standard heading tag? If not, the PDF fails the test.

Instruction 7.3: Open the Accessibility tags pane (View menu > Show/Hide > Navigation Panes > Accessibility tags). Check all heading tags in the document are in logical sequence without skipping a level.

Note: You could also run the Accessibility Check (Tools > Accessibility > Open > Accessibility Check > Start Checking). The Headings section will display: Appropriate nesting – Failed if headings are tagged out of sequence.



Figure 28: Incorrectly nested heading sequence

Test 7.3: Are all the headings in the document nested in a logical sequence (<H1>, <H2>, <H3>; <H1>; <H1>, <H2>)? If not, the document fails this test.

8. Are lists tagged correctly?

How to test 8

Lists help organize and structure content. Assistive technology users cannot infer meaning from lists created using only tabs, a dash, or manual numbering. To create the appropriate structure tags for lists in PDF that are accessible to assistive technology users, the lists must be programmatically identified using built-in styles/settings for lists in the source documents. All lists must have a parent **List (L)** tag, with a nested child **List Item (LI)** tag. All **LI** tags must have a nested child **Label (LbI)** tag and a child **List Item Body (LBody)** tag. Multi-level lists must be nested in the last **LBody** tag of the preceding level.

Note: Lists originating in Microsoft Word will not export a **Label (Lbl)** tag. The **List Item Body (LBody)** tag includes the bullet or number pertaining to that **List Item**.

Instruction 8.1: Open the Accessibility tags pane (View > Show/Hide > Navigation Panes > Accessibility tags). Locate bulleted, or numbered lists in the page content. Highlight the list and find

its corresponding tag (**Accessibility tags Options** menu > **Find Tag from Selection**). Expand the list tag (activate the triangle next to the <L> tag).

Test 8.1: Does the highlighted content have a parent <L> tag, with nested child **List Item (LI)** tag(s), and do all child tags have nested <Lbl> and/or <LBody> child tags? If not, the PDF fails this test.



Figure 29: Example of correct tag structure in the tag tree

Instruction 8.2: Open the **Accessibility tags** pane (View > Show/Hide > Navigation Panes > Accessibility tags). Locate any multilevel lists in the content document. Highlight the second list level content and find its corresponding tag (**Accessibility tags Options** menu > **Find Tag from Selection**).





Test 8.2: Are the tiered multilevel lists nested in the last **LBody** tag of the preceding level? If not, PDF fails this test.

Objects

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

How to test 9

Images, Objects, Shapes, Charts, etc. allow authors to provide meaningful information in a visual format. Assistive technology users cannot infer meaning from selecting the illustration alone. To provide assistive technology users comparable access to the purpose or meaning of graphic content a contextual description in the form of a caption, nearby text, or **Alternate Text** is required.

Note 1: Images of, or that contain text (i.e. logos, agency seals) should have the text that is part of the image included in the alternate or descriptive text.

Note2: Complex Images, charts, graphs, etc. may require a longer description. These types of descriptions are usually part of the tagged content or offered as a caption and require no test in PDF. Images/Objects associated with longer descriptions may have been artifacted to avoid redundant alternate text.

Instruction 9: Activate the Accessibility Check (Tools > Accessibility Check > Documents > Start Checking). Expand the Alternate text category in the Accessibility Checker pane to display issues.



Figure 31: Accessibility Check Alternate Text - Failed testing results

Test 9: Does the Alternate text group display Passed results for all listed categories? If not, the PDF fails this test.

10. Does the PDF have data tables?

How to test 10

Data tables in PDFs must be tagged as **<Table>**. Table rows must be tagged as **Table Row <TR>**, column and row header cells must be tagged as **Table Header Cell (TH)**, and data cells must be tagged as **Table Data Cell (TD)**. Tables containing multiple header rows, or cells that span multiple rows or columns are complex tables and must have data / header associations to be accessible.

Note: the table editor is a visual tool that is not keyboard accessible. To verify/test the correct reading order of a complex table, assistive technology users must use the Accessibility tags pane to tab and/arrow through the table tags. Assistive technology users may skip the tests in Section 10.

Instruction 10.1: Locate programmatically identified data tables. Open the Accessibility tags pane (View > Show/Hide > Navigation Panes > Accessibility tags) and select the first table in the tag tree. Expand the Accessibility tags Options menu and type the letter **q** to open the table editor and verify the table header cells are tagged as table headers.



Test 10.1: Are the table header cells tagged as <TH> and the data cells as <TD>? If not, the PDF fails this test.

Complex tables (tables with multiple header rows/columns, split or merged cells) require **Header Cell ID**s to create associations with related header/data cells providing assistive technology users accurate reading order of the table data.

Instruction 10.2: Open the Accessibility tags pane (View > Show/Hide > Navigation Panes > Accessibility tags) and select the first table in the tag tree. Expand the Accessibility tags Options menu and type the letter **q** to open the table editor. Select a **<TH>** cell in the document content window, **right click** to open the table editor options, and select **Table Cell Properties...(P)**. For each table header cell verify:

- 1. Header Cell radio button is checked
- 2. Scope indicates **Column** or **Row**
- 3. Attributes field for Row Span and Column Span are correct
- 4. ID: field has a unique identifier
- 5. If applicable, Associated Header Cell IDs are listed

Note: If the cell tags identifiers (**TH**, **TD**) do not display, check the **Show table cells** options in the Reading Order Pane, or under the **Table Editor Options...** section in the table editor options pop-up window.



Figure 33:Table Editor options window

Test 10.2: Does the header cell scope, row, and column span match the visual layout of the table, and do header cells display a unique identifier under the ID: field? If not, the PDF fails this test.



Figure 34: Example of cell properties options for a table header cell for a complex table

Instruction 10.3: Complex tables require an additional test to verify table data cells and table header cells are associated (linked) to ensure the data reads correctly for assistive technology users.

Open the Accessibility tags pane (View > Show/Hide > Navigation Panes > Accessibility tags) and select the first table in the tag tree. Expand the Accessibility tags Options menu and type the letter **q** to open the table editor. Select a **<TD>** cell in the document content window, **right click** to open the table editor options, and select **Table Cell Properties...(P)**. For each data cell verify:

- 1. Data Cell radio button is checked
- 2. Attributes field for Row Span and Column Span are correct
- 3. Associated Header Cell IDs: for row and column headers are listed

Image: Constraint of the second se
Q2 Q3 TD 16 TD 12 O Header Cell Scope: None O Data Cell TD 13 O Attributes
Attributes 0
TD 11F TD FO Row Span: 1
115 115 10 59 Row Span: 1 3
Column Span: 1 ID:
Associated Header Cell IDs: FY16Q2 FY16A PEnd
OK Cancel

Figure 35: Table cell properties for a data cell

Figure 36: Example of data cell associations with header cells in table cell properties

ТН	TH	FY16A (actual)	TH	FY 2017 (projected)
ТН	TH Q1	TH Q2 FY16Q2	Table Cell Properties	×
TH 'roject PEnd I ←	^{TD} 17 ^{TD} 25 ^{TD} 112	ID 16 ID ID 13 ID ID 115 ID	Type O Header Cell Scope: None O Data Cell Attributes Row Span: 1 Column Span: 1 ID:	
			Associated Header Cell IDs: FY1602 FY16A PEnd	OK Cancel

Test D: Are Data Cells associated with Header Cell IDs (Figure 29)? If not, the PDF fails this test.

11. Does the PDF have links and controls?

How to test 11

Links and controls must:

- 1. Be uniquely identified
- 2. Describe the destination, function, and/or purpose in the name or within context
- 3. Be in a tab order that matches the visual/logical order of interactive elements (links, controls, and form fields)

Instruction 11: Press the Tab key to navigate to links and user controls in the content. Check that each identified link has an unambiguous name that describes its destination, function, and/or purpose **OR** that it is determinable within context. For images that are a link or user control, the alt-text may contain the link purpose, function, or destination.

Uniquely identified Link:	further guidance is available on <u>www.section508.gov</u>
Links Determinable within Context:	Additional guidance is available in the AED COP best practices library.
Ambiguous Links Not Determinable Within Context:	Click here / Click here for information about each topic.

Table 1: Link examples

Test 11: Does the link have a unique name that describes the destination, function, and/or purpose **OR** that is determinable within context? If not, the PDF fails this test.

12. Is the PDF a fillable form?

How to test 12

To complete a form using assistive technology, it is necessary to provide instruction, directions, and cues allowing the assistive technology user to enter information correctly and accurately in the designated fields.

Instruction 12.1: All form fields must have a tooltip, and the tool tip must match its label or instruction.

	or a mable form, toottip showing over a selecte	
	Registration F	orm
First Name		Midd
Last Name	enter First Name	Date
Address 1		

Figure 37: Example of a fillable form, tooltip showing over a selected field

Test 12.1: When you tab through or hover over each form field, is a tooltip revealed and does the tooltip/instruction correspond to the label? If not, the PDF fails this test.

Instruction 12.2: Press the tab key to find form fields (text fields, radio buttons, checkboxes, combo boxes, etc.). The tab order must correspond to the visually logical order of the form fields.

Test 12.2: When you tab through the PDF, does the tab order match the visually logical order of the form fields? If not, the PDF fails this test.

13. Does meaningful information conveyed only with color or other visual characteristics also have a text description?

How to test 13

Using only color or other visual characteristics (shape, size, page location, etc.) to convey meaning will not provide comparable access to people who are blind, have low vision, or are colorblind.

Instruction 13: Find where color and/or other visual characteristics, such as *green square in right corner of the screen, large yellow rectangle, bottom center of the page*, etc., are used to convey meaning.

Pro	ject	Status
Proj	ect A	
Proj	ect B	
Proj	ect C	

Table 2: Example of project status table using only color to convey project status - Failed condition

Table 3: Example of project status table using color with text description to convey project status – Passing condition

Project	Status
Project A	Green - On Time
Project B	Yellow - At Risk
Project C	Red - Late

Test 13: Is there text that conveys the meaning of the color or other visual characteristics? If not, the document fails this test.

14. Is the contrast ratio between text and background sufficient?

Note: This test is not necessary, if the document text is black on white background (or close to it). This test requires the <u>Colour Contrast Analyser</u> (an external application) to get accurate ratio numbers. The Accessibility pane (Keyboard navigation).

How to test 14

Instruction 14: Open the Colour Contrast Analyser application. Drag the Foreground eyedropper icon over a sample of the text or image of text. Drag the Background eyedropper icon over a sample of the background color.

5 1 1	•
📈 Colour Contrast Analyser (CCA) — 🗆 🗙	🔀 Colour Contrast Analyser (CCA) — 🗆 🗙
Colour Contrast Analyser (CCA) Edit View Development	Colour Contrast Analyser (CCA) Edit View Development
Foreground colour (black)	Foreground colour
HEX * #000000	HEX • #00B050
14】 苹【24】 ④	11 🛱 💋 🌒
Background colour (white)	Background colour (white)
HEX V #FFFFF	HEX #FFFFF
茸 🖉 🖉	茸 🖉 🖉
▼ Sample preview	▼ Sample preview
example text showing contrast	example text showing contrast
WCAG 2.1 results Contrast ratio 21:1	WCAG 2.1 results
► 1.4.3 Contrast (Minimum) (AA)	► 1.4.3 Contrast (Minimum) (AA)
⊘ Pass (regular text) ⊘ Pass (large text)	Seail (regular text) Seail (large text)
► 1.4.6 Contrast (Enhanced) (AAA)	► 1.4.6 Contrast (Enhanced) (AAA)
	Seail (regular text) Seail (large text)
► 1.4.11 Non-text Contrast (AA)	► 1.4.11 Non-text Contrast (AA)
	Sail (UI components and graphical objects)

Figure 38: Examples of pass and fail results with the Colour Contrast Analyser

Test 14: Does color contrast ratio of Foreground (text) and Background ratio meet the minimum contrast ratio (4.5:1)? If not, the document fails this test.

Note: To check for color blindness simulation with any preview in the testing window, open the **View** menu and select the **Colour Blindness simulation** (**Ctrl+B**) option.

	-		
📕 . Colour blindness simu	lation		×
Monochromacy			
Achromatopsi no coloui		Achromatomaly almost no colour	
Sample)	Sample	
Dichromacy			
Protanopia no red	Deuteranopia no green	Tritanopia no blue	
Sample	Sample	Sample	
Trichromacy			
Protanomaly low red	Deuteranomaly low green	Tritanomaly low blue	
Sample	Sample	Sample	

Figure 39: Colour Contrast Analyser color blindness simulation samples

Miscellaneous

15. Does the PDF contain audio-only, video-only, or multimedia objects that contain meaningful information?

How to test 15

PDFs that contain audio, video, or multimedia files must have additional information so individuals with disabilities have comparable access to the information.

Туре	Also include:	What is this?
Video-only	Accurate and complete text description	A description is a text version of what is being shown in a video-only file.
Multimedia (audio and video)	Accurate, complete, and synchronized captions and audio descriptions	Captions are time-synchronized text version of exactly what is being said and/or a description of the relevant sounds in the multimedia file. Audio descriptions are time- synchronized descriptions of what is being shown in the multimedia file.

Table 4: Additional information required for video-only or multimedia files embedded in PDFs

Note: If the PDF does not contain audio, video, or multimedia files, you do not need to perform this test.

Instruction 15: Activate the meaningful audio-only object

Test 15.1: Does the audio-only object have transcript that is accurate and complete? If not, the PDF fails this test.

Test 15.2: Does the video-only object have text description that is accurate and complete? If not, the PDF fails this test.

Test 15.3: Does the multimedia (audio and video) have synchronized captions and audio description that are accurate and complete? If not, the PDF fails this test.

16. Does the PDF have flashing objects?

How to test 16

Federal agencies do not typically see flashing objects embedded into documents. Since flashing objects may be a public safety issue for individuals with photosensitive epilepsy and there is not typically a compelling business need, flashing objects should be excluded. If you feel you do have a compelling business need, please contact your agency's Accessibility Team for assistance in ensuring your object flashes below 3Hz.

17. Does the PDF need an accessible alternate version?

How to test 17

Federal agencies have the goal to produce one accessible document for everyone. However, there may be times when this is not feasible. Therefore, it is recommended that you contact your agency's Accessibility Team to ensure an alternate version is necessary, since you are still required to create an alternate version that is accessible, up-to-date and has equivalent content.