

MS Word 2010—Section 508 Conformance Test Process

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## About the AED COP

In October 2012, subject matter experts from several federal agencies developed an Accessible Electronic Document Community Of Practice (AED COP). The following goals were set:

* Increase awareness of the importance of access to Accessible Electronic Documents across the federal community.
* Promote successful strategies which increase the ability of federal employees to create accessible electronic documents.
* Advance the field of accessibility for all participating agencies by creating a repository of accessibility artifacts.
* Identify and improve the alignment of requirements defining accessible electronic documents across for all participating agencies.
* Promote successful strategies which create the highest level of accessibility for documents at the lowest cost.
* Identify and supply best practices to the CIO Council Accessibility Committee Best Practices Subcommittee.[[1]](#footnote-1)

The result of the collaboration between agencies is reflected in the current document, and associated documents:

## Associated documents from the AED COP

* **Baseline Tests for Accessibility**—The Baseline Tests represent interagency agreement on what to test and how to test. The Baseline Tests are a set of individual requirements and test steps for Section 508 conformance. The Baseline Tests do not make up a ‘test process’ per se; instead, conformance test processes and authoring guidance is created from the Baseline Tests.
* MS **Word** 2010
* MS **PowerPoint** 2010
* MS **Excel** 2010
* Adobe **PDF** (Portable Document Format)
* Adobe **LiveCycle**
* **Section 508 Conformance Test Process**—for use by Section 508 testers, these documents contain *only* the necessary information for conducting a test of an already-authored, already-formatted document.
* MS **Word** 2010 *(the current document)*
* MS **PowerPoint** 2010
* MS **Excel** 2010
* Adobe **PDF** (Portable Document Format)
* Adobe **LiveCycle**
* **Authoring guides**—for use by persons who are authoring documents (creating content and formatting). Contains guidance on creating accessible documents from scratch, and guidance on how to test a document for conformance with the Baseline requirements.
* MS **Word** 2010
* MS **PowerPoint** 2010
* MS **Excel** 2010
* Adobe **PDF** (Portable Document Format)
* Adobe **LiveCycle**

## How this document is structured

**Section 1** **introduces** the test process, and the rationale behind each individual test.

**Section 2** provides details of the **test tools** used.

**Section 3** contains the **test processes**.

There are six main test sections and the majority have subsection tests. Each test contains the following information:

**Rationale:** Each numbered test begins with a summary of the rationale for the test. The full rationale is provided separately beginning on page 4.

**How to test:** Each test has step-by-step instructions that should be followed in order. Instructions on how to find applicable elements are followed by instructions on how to inspect and determine which elements are conformant.

**Results:** Each failure condition has an alphabetic letter for use in reporting. Each condition lists the corresponding Section 508 standard and Baseline test that fail if found non-conformant. For each failure condition, results are described as “Does Not Apply [DNA]”, “Non Conformant [NC]”, and “Conformant [C]”.

**Applicable 508 standards:** A short name has been given to each Section 508 standard. The actual text from the published standard follows the short name.

**Applicable Baseline Requirements:** The actual text from the published Baseline Tests for Accessibility is provided. Test rationale, how to test, and results is taken from the AED COP Baseline Tests for MS Word 2010 (see “Associated documents from the AED COP” on page 1).

**Cross-references tables** are included at the back of the document. These tables indicate the relationship of the tests to Section 508 requirements and Baseline tests.

## Key to symbols

 T**ool** to use to find and/or examine elements

 **Accessibility Checker Tool** (see page 13)

 Example...

 **Question points** that determine next steps

 Additional **information**, notes, tips, etc.

 Alerts, exceptions etc.

 Related tests

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# Section 1:Introduction and rationale for tests

## Purpose of this test document

The instructions provide a check for MS Word documents against the Baseline Requirements for accessibility that have been agreed upon by members of the AED-COP (see p.1). The Baseline Requirements map to Section 508 Standards. This document contains the AED-COP’s recommended conformance process, offered as a complete and thorough check of issues that affect accessibility as covered by Section 508. The tests have been validated as accurate, repeatable and usable by the AED-COP membership.

## Intended audience/users of this document

This document is:

* Intended for checking accessibility only. This document is not intended as a guide for editing, authoring or remediating documents. Authoring guides are available separately (see p.1).
* Designed for use by accessibility practitioners such as document testing in publication or accessibility offices.
* Designed to be used by accessibility practitioners without the need for additional training (although this document may be used as a part of training).
* Intended to be used to support agency policies regarding publication. For example, an agency may decide that documents that are intended for agency-wide or public dissemination must pass these tests.
* Compiled from the AED-COP’s “Harmonized Processes for Section 508 Testing: Baseline Tests for Accessible Electronic Documents—MS Word 2010”. There are no additional tests in this document.

## The baseline requirement and rationale for each test

Each step of the test process (starting on p.15) includes information that needs to be referenced frequently such as the directions on how to test and how to interpret the test results. To simplify the organization of this document, the baseline requirements and associated rationale(s) for each individual test are separated out and presented below.

## 1.1. Form elements

Baseline Requirement B20. Forms. Labels, instructions, directions and cues necessary to complete a form must be programmatically or textually associated with their respective input control.

In order to correctly and accurately complete a form, it is necessary to follow instructions, directions and cues, as well as enter information in the correct fields. If cues are only visually associated with controls (e.g., by visual proximity), it may not be possible for users without vision, or with low vision, to find the related instructions for the current form component. If input controls are not textually identified, then users without vision, or with low vision, may find it difficult or impossible to be certain they are filling out the form correctly (e.g., is this field for my name, or my spouses name?). When forms are created that rely on visual cues only (i.e., there are no programmatic links between instructions and named form components), users who cannot rely on vision may find it difficult or impossible to fill out the form. Non-visual use of a form is facilitated when there is a programmatic association between all relevant instructions, directions and cues and their respective components/controls.

 A given form component may be the subject of instructions that are not positioned next to the component (e.g. at the top of a form, the instruction is "If you are the home owner, complete parts a, b, and f"). In such cases, form designers will use visual layout and flow to direct the user. In such cases the user must be able to access all relevant instructions when using the given form component(s).

 Read-only (i.e., pre-filled) form fields are considered interactive, in that they need to be inline, and must be labeled.

 It is implicit in this requirement that the ability to read instructions and cues and fill in form components must be achievable in one mode of operation (i.e., there cannot be one mode to read the form’s instructions and another mode to fill in the form elements).

## 1.2. Title of the document

Baseline Requirement B3. Document Title (Filename). The filename must identify the document or its purpose.

In addition to being used to locate and open documents, filenames are also used when switching between documents and between applications during work tasks. Windows-based operating systems show thumbnail / preview images which speed up the task of locating and switching between files. For screen reader users, the preview is unavailable but the filename is. If the filename does not properly identify the document or its purpose (such as “Document 7”or “Directions”), people with disabilities have to expend extra time to open and read the file’s content to identify it. Having a filename that adequately identifies the document and its purpose (such as “Hiring Policy [Document 7])”; “Directions to AED-COP HQ”) helps provides comparable access during typical work tasks.

## 1.3. Language of the document (Reserved)

Baseline Requirement B6. Document Language. The document language must be programmatically identified.

A document can be programmatically marked as a specific language. Assistive Technology (AT) also accesses the programmatic language setting to provide the appropriate pronunciation while speaking the document. If the language is not programmatically set (such as a document is written in Spanish but the document is programmatically set as English), then the speech of the screen reader could be incomprehensible to a Spanish speaker. Setting the appropriate language enables the content to be delivered as the author intended for screen reader users.

## 2.1. Headings

Baseline Requirement B4. Headings. Headings must be programmatically identified and match the visual outline level.

Headings are used to aid content navigation in terms of locating required content, and determining the importance or hierarchy of content (such as major section, section, sub-section). In addition to visual text formatting (such as bold, italic, underline, or combinations), programmatic formatting can identify the presence of a heading and its outline level. Assistive technologies such as screen readers and voice dictation systems rely on programmatic formatting to navigate between headings ( for example, there is no way to automatically determine whether bold underlined text is a heading, or merely a point of emphasis). Without programmatic formatting of headings, a document containing many visually apparent headings appears to AT as a document containing no headings. Assigning programmatic formatting that includes both the presence of and the and outline level of headings provides comparable access in terms of the comprehensibility of the content.

 The requirement should not be construed to require headings in place of headers in data tables.

 This requirement does not mean that headings be added; it means that where headings are identifiable through visual formatting, they must be programmatically identified.

 Any visual representations of heading level (e.g. major section, section, subsection) must be matched by the programmatic heading level (e.g. major section = level 1, section = level 2, sub-section = level 3).

## 2.2. Lists

Baseline Requirement B8. Lists. Bulleted, numbered, and multi-level lists must be programmatically identified.

Bulleted, numbered, and multilevel lists are used to present content in parts. Although lists can be represented with plain text (such as , preceded by a bullet character such as “●”, “□”, “◊”), they are easier to edit and manage when they are identified programmatically. When lists are programmatically identified the list parts can be navigated using screen reader AT. When lists are formatted using plain text only, they visually appear as a list but there is no equivalent functionality for screen reader AT. By using programmatically identified lists, screen reader AT functions allow equivalent navigation of list parts. For example, knowing how long the list is (is it 20 items? 200 items? or 2000 items?); understanding the relationship between levels (e.g. major item versus sub-level item); and being able to jump out of the list to the next part of the document (i.e., the next regular non-list paragraph).

## 2.3. Columns

Baseline Requirement B2. Reading Order. The visual and/or logical reading order of meaningful content must be programmatically maintained.

When the placement of content uses formatting elements such as text in columns, call-outs, tables, images etc., an intended reading order is visually and/or logically apparent. Text and objects can be accessed by moving the keyboard cursor from element to element. The programmatic order in which the cursor moves depends on the placement of content. AT users rely on the keyboard cursor to move through text and objects. When the placement of objects causes the programmatic order to differ from the intended reading order, content may be read out of order and therefore not comprehensible. A match between the intended reading order and the programmatic order provides comparable access for AT users.

 To be in the reading order, objects usually need to be placed ‘inline’ (see test #1.)

## 2.4. Language of sections

Baseline Requirement B5. Section Language. Sections that use language other than the default must be programmatically identified (except for proper names, technical terms, or foreign words that have become part of the vernacular).

Passages or phrases can be programmatically marked as a specific language. Screen reading AT also accesses the programmatic language setting to provide the appropriate pronunciation while speaking that section of the document. If the language is not programmatically set (for example, in an English language document a section is written in Spanish but all of the document is programmatically set as English), then the speech of the screen reader could be incomprehensible to a Spanish speaker. For multilingual documents, properly setting the appropriate language changes enables the content to be delivered as the author intended for screen reader users.

## 2.5. Links

Baseline Requirement B7. Links and User Controls. The distinct destination, function or purpose of links and user controls must be described in the link/control name or surrounding text.

Selectable links and controls can be visually represented as ambiguous text (such as “click here | click here | click here”), or as plain language text (such as “Holiday Dates”), or as ‘code’ (such as “http://www.dxds.tv/h2013.html”.), or as images (such as “►”). Combinations are also possible (such as “Play audio file ►”; “Holiday Dates ([http://www.dxds.tv/h2013.html)](http://www.dxds.tv/h2013.html%29)”. To be able to understand the purpose of a link / control, screen readers must be able to convey an unambiguous name. If a link does not have an unambiguous name or description in surrounding text, then Screen reader AT will only be able to provide ambiguous text, code or images. Unambiguous names for links and user controls provides screen reader users with the ability to navigate and use content.

## 3.1. Running headers, footers and watermarks

Baseline Requirement B12. Running Headers, Footers, and Watermarks. Vital information contained in running headers and footers or watermarks must also be located at or near the start of the related information in the main content area.

By default, running headers, running footers and watermarks are programmatically separate from the main content or body of the document. Watermarks and other content placed in running headers and footers are accessible to users with disabilities but not read by screen reader AT unless the user makes a deliberate choice to visit these areas. If a user cannot see a “CONFIDENTIAL” watermark, they will not know the sensitivity of the information and be significantly and adversely impacted if they share the information with others. Or, if the running header on an instruction document reads “Response required within 60 days or benefits may be terminated”, then the reader may be significantly impacted if they do not know the information is there. For visual users, accessing information in running headers, footers and watermarks does not require any deliberate extra actions on their part. For screen reader AT users, they would have to do a great deal of extra work of examining whether there are running headers, running footers and watermarks for every page or section of every document just to find out whether vital information pertains to them. When vital information contained in the watermark and the running header and footer sections appears at least once at or near the start of the related information in the main content area, screen reader AT users have an equivalent level of access as sighted users.

 In determining if the information is “vital”, consider if the reader will be negatively impacted if they do not read or are never aware of the information.

 Automatically generated information does not need to be included in the main content. For example, page and section numbers are automatically generated by the application, and can be obtained by the reader via the application.

## 3.2. Tables

Baseline Requirement B1. Inline Elements. Meaningful text and objects must be placed inline.

Text and objects can be formatted in documents to be ‘inline’ or ‘floating’ / ‘wrapping’. Inline text and objects can be accessed by moving the keyboard cursor from element to element. Floating objects can be placed in front or, behind, or wrapping around the inline objects but they cannot be reached via the keyboard cursor. AT relies on the keyboard cursor to move through text and objects. Therefore, AT users cannot access floating objects. Floating content such as images overlapping inline text or tables that are surrounded on all sides by continuous text are not accessible via the keyboard cursor and therefore not accessible to AT users. Placing meaningful text and objects inline means all document content can be read and accessed by those who rely on navigation via the keyboard cursor.

Baseline Requirement B2. Reading Order. The visual and/or logical reading order of meaningful content must be programmatically maintained.  page 6.

Baseline Requirement B10. Data Tables (Headers). Header cells must be programmatically identified in data tables.

To understand the data stored in a cell, or in groups of cells, it is necessary for the reader to be able to connect the data with the information in one or more headers. Typically, visual formatting is used, such as borders, bold fonts and shading to designate cells as being ‘headers’. To screen reader AT, visual formatting of headers has no inherent meaning. However, programmatic formatting can also be applied to cells to designate them as ‘headers’. When programmatic formatting is not applied to headers, AT is not able to identify the relationship between data cells and/or their associated headers. When programmatic formatting is properly applied, it becomes possible for screen reader AT users to access the same logical data-header content relationships that are typically provided via visual formatting.

 Data tables are those tables where the information in a cell requires a row or column header to adequately describe the cell's contents. If a table is used for placement of components on the page for visual aesthetics, then it is a layout table. This test applies to data tables only.

 This test applies to simple tables as well as complex data tables. Complex data tables are defined as those that have two or more levels of headers, and/or include split or merged cells.

Baseline Requirement B11. Data Tables (Cell-Header Association). Data cells must be programmatically identified with their associated header cells in complex tables.

To understand the data stored in a cell of a complex data table, it is necessary for the reader to be able to connect the data with the information in more than one header. Typically, multiple headers can be visually represented using layers of rows and columns, as well as split and merged header cells. To screen reader AT, visual formatting of headers has no inherent meaning. However, programmatic formatting can also be applied to data cells in complex tables to designate which headers the data is associated with. When programmatic formatting is not applied to headers, screen readers are not able to identify the relationship between data cells and/or their associated headers. When programmatic formatting is properly applied to complex data tables, it becomes possible for screen reader AT users to access the same logical data-header content relationships that are typically provided via visual formatting.

 Data tables are those tables where the information in a cell requires a row or column header to adequately describe the cell's contents. If a table is used for placement of components on the page for visual aesthetics, then it is a layout table. This test applies to data tables only.

 This test applies to complex data tables only. Complex data tables are defined as those that have two or more levels of headers, and/or include split or merged cells.

## 3.3. Images and other objects

Baseline Requirement B1. Inline Elements. Meaningful text and objects must be placed inline.  page 7.

Baseline Requirement B2. Reading Order. The visual and/or logical reading order of meaningful content must be programmatically maintained.  page 6.

Baseline Requirement B13. Images and Other Objects. All meaningful objects must have text describing their purpose or function.

Objects such as images, charts, and diagrams can be used to convey meaningful content that is necessary for understanding a document. Screen reading AT can access text but cannot automatically interpret the meaning of images and other objects. Screen readers can read text that has been associated with images. If the meaning of an image or other object is not conveyed in text, there is no associated information that can be accessed by screen reader AT. Providing text equivalents for images and other objects provides users of screen reader AT the intended meaning of a document’s content.

 The meaning of visual information is inherently contextual. For example, a picture of a person running on a page about athletics is contextually different to the same picture of a person running on a page about data connection speeds. Therefore, instead of just describing a picture ("person running") a description is needed in context ("Come join the athletics team" versus "With our network speeds, you'll be ahead of the race").

 Images of text are sometimes used instead of screen text to achieve an artistic effect. When text is rendered as an image, the Alternate text should be the same words verbatim.

Some images are decorative and convey no information. Decorative components do not need a description.

## 3.4. Flashing

 The Baseline Test for flashing is marked “Reserved” because there is no universally agreed-upon test. However, agencies are obliged to include a test for flashing to reduce the likelihood of causing a seizure in a user with photosensitive epilepsy. It is therefore incumbent on agencies to apply due diligence to try to lower the likelihood of causing injury. The test herein is the recommended interim solution.

Baseline Requirement B9. Sections(s) of the document should not flash at or above 3Hz.

A flashing / blinking component is one that is set to turn on and off continuously. The component can be anything on the screen, such as a piece of text, an indicator, a section of the screen, or the whole screen. A component that flashes or blinks in the visual field can cause adverse reactions in people who have photosensitive epilepsy. The size, intensity and duration that causes seizures varies from individual to individual. It is well established that objects flickering in the frequency range from 3Hz to 55Hz (from three times to 55 times per second) should be avoided. By avoiding flickering components in the specified range, the risk of inducing seizures is significantly reduced.

 Scrolling ('marquee') text may cause a flashing effect under certain circumstances.

 At flash rates approaching and above 55Hz, flashing can be imperceptible to the naked eye (the component(s) will look like they have a steady state). For this reason there is no test that deals with the higher cut-off point of 55Hz.

## 3.5. Revealing hidden content

Baseline Requirement B21. Focus (Revealing Hidden Content). Components that reveal hidden content (text boxes, thumbnail images, call-outs, comments, light boxes, pop-ups etc.) must either (i) shift focus to the content they reveal, or (ii) the component must describe that a change to the content will occur if selected.

Some components can be intentionally hidden to reduce visual clutter, requiring a user action to reveal the content. It is normally easy for visual users to see that content has been revealed. However, for non-visual users, the fact that content has been revealed may not be apparent, unless the focus moves to the revealed content. If focus does not move to the revealed content, then a description could be used to inform the user of what happens when that control is selected. If there is neither a shift in focus nor an a description of changes to content, then users of screen reader AT may be unaware that the visually revealed content exists. This content may be essential for understanding and using the document. Providing focus changes to the revealed content or describing the changes ensures that screen reader AT users will have access to the information as intended by the author.

## 4. Color (and other sensory characteristics) formatting

Baseline Requirement B14. Color and Other Sensory Characteristics. Information conveyed through sensory characteristics (such as color, size, shape, and location) must also be provided in text.

A sensory characteristic can be used to convey information. For example, a dot in a table cell is green for 'project on schedule', orange for 'delayed', and red for 'past due'. In this case color is the sensory characteristic that changes. For any given sensory characteristic, some users will not be able to rely on that characteristic. For example, non-visual users cannot rely on visual size, shape and location. If an instruction for interactive content says “press the bigger dot to the right move forward, and the smaller dot to the left return to the beginning”, non-visual users will not be able to discern the visual differences between the controls. When sensory characteristics are the only means used to convey information, people who are blind, color blind or have low vision do not have equal access to the information. When information that is being conveyed by sensory characteristics is also available in a textual format (such as in a control’s text name), it can be accessed using screen reader AT.

 This requirement does not mean that sensory characteristics cannot be used; it means they cannot be the only means of conveying the information.

Baseline Requirement B15. Color (Contrast). Text and Images of text must have contrasting colors/shades at a ratio of 4.5:1 for discerning between background and foreground and at a ratio of 3:1 for large text (14pt bold or 18pt regular). Exclude incidental text, text overlaid on images, and logotypes.

Color/shade choices that do not contrast well with each other may be deliberate (i.e., artistic preference), or they may be the result of programmatic features (e.g. a button's text is black on white, but the text turns yellow in a certain mode, and the background remains white). Visual contrast sensitivity reduces as people age. Screen brightness, ambient light, color blindness and some types of low vision are also contributing factors to perceived contrast levels. Having a low level of contrast between foreground text and the background will mean that some people will be unable to see the content as intended. In general, the higher the level of contrast used, the more people will be able to see and use the content.

 Large text is defined here as 14pt bold font or larger, or 18pt regular font or larger.

## 5.1. Audio-only

Baseline Requirement B16. Audio (Transcripts). Meaningful audio-only content must be accompanied by a text transcript.

Embedded audio-only content (such as speeches and recorded meetings) can contain meaningful information necessary to understand a document. Some users will not be able to rely on audio. If there is no text equivalent to the audio, the meaning contained in the content will not be available. Providing a text only version of what is being said, and/or a description of the relevant sounds gives equivalent access to the content for people who are unable to rely on audio.

 Audio-only content may be delivered as an embedded file, as streamed file, or other means.

 Other short sounds such as confirmation beeps and error notifications are not included in this requirement.

 ‘Decorative’ audio would include background music that conveys no content.

## 5.2. Video-only

Baseline Requirement B17. Video (Descriptions). Meaningful video-only content must be accompanied by a description.

Embedded video-only content (such as animations and slideshows.) can contain meaningful information necessary to understand a document. Some users will not be able to rely on video. If there is no text equivalent to the video, the meaning contained in the content will not be available. Providing a text only version of what is being shown, and/or a description of the relevant video gives equivalent access to the content for people who are unable to rely on video.

 Short animation effects such as button activation highlights and file shrink/disappear on closure are not included in this requirement.

 ‘Decorative’ video includes background images that convey no content.

## 5.3. Synchronized media

Baseline Requirement B18. Synchronized Media (Captions). Synchronized media must have captions that are time-synchronized with the dialog and relevant sounds.

Embedded media content includes time-synchronized video and audio (such as movie clips, spoken presentations, and narrated slide-shows) can contain meaningful information necessary to understand a document. Some users will not be able to rely on audio. Therefore, there needs to be a synchronized text only version of what is being said, and/or a description of the relevant sounds. If there are no captions for the audio, the meaning contained in the content will not be available. Providing time-synchronized captions of what is being said, and/or a description of the relevant sounds gives equivalent access to the multimedia content for people who are unable to rely on audio.

 Captions need to be available, but are not required to be turned on by default. For example, users who need captions can switch them on with a control. If there is no means of switching modes, then the captions must be always on (i.e., the content is ‘open captioned’).

 The captions must allow understanding of the relevant information. For example, captions might include loud bangs, floorboards creaking, or alarms sounding.

 Synchronization is required for the Alternative presentation modes. Because captions must be synchronized, a text transcript will not meet this requirement. Synchronized media content cannot be played and then followed by a summary of the sounds. Instead, the auditory events must be conveyed as they are happening.

Baseline Requirement B19. Synchronized media (Descriptions). Synchronized media must have audio descriptions that are time-synchronized with the video.

Embedded media content includes time-synchronized video and audio (such as movie clips, spoken presentations, and narrated slide-shows) can contain meaningful information necessary to understand a document. Some users will not be able to rely on video. Therefore, there needs to be a synchronized auditory version of what is being shown, and/or a description of the relevant visual events. If there are no audio descriptions for the video, the meaning contained in the content will not be available. Providing time-synchronized audio descriptions of what is being shown, and/or a description of the relevant visual events gives equivalent access to the multimedia content for people who are unable to rely on video.

 Descriptions need to be available, but are not required to be turned on by default. For example, users who need descriptions can switch them on with a control. If there is no means of switching modes, then the descriptions must be always on.

The descriptions must allow understanding of the relevant information. For example, descriptions might include the looks on people’s faces, people handing items to each other, or who has entered the room.

 Synchronization is required for the Alternative presentation modes. Because descriptions must be synchronized, a separate text description will not meet this requirement. Synchronized media content cannot be played and then followed by a summary of the visual events. Instead, the visual events must be described as they are happening.

## 6. Alternative accessible version

Baseline Requirement B22. Alternative Accessible Version. An alternative accessible version must contain equivalent and up-to-date content when the primary document cannot be made accessible.

Some information is inherently visual in nature (e.g., geographic maps, organizational charts). There may be instances where an alternate version of a primary document is provided, because an agency has determined that the primary document cannot be made accessible (e.g., a complex organizational chart may have to be written in prose, and this prose cannot fit within the specified page limits of the primary document). When an alternative accessible version is supplied, if the content in the alternative version is not kept up-to-date, or is not equivalent, then users who rely on the alternative version will be at a disadvantage. For example, a policy specifies that when severe weather is anticipated a map is supplied to employees, and an alternate text-only version is supplied at the same time. Therefore, those in charge of releasing the severe weather bulletins must be trained to always create an equivalent, up-to-date text-only version. Providing an accessible version is only useful when the information is equivalent and up-to-date.

 The information should be 'equivalent' but by definition this is not going to be 'exactly the same'. The main points, themes, concepts etc. that the authors are trying to convey in the primary content should also be present in the alternate format. For example, if a complex chart in the primary document shows a year with a small increase in Q2 earnings and a large decrease in Q3 and the text discusses why these trends occur, the alternative accessible version should convey the high and low data points of interest and the trends. An alternative accessible version that just gave all the data points with no mention of the trends would not be considered equivalent.

# Section 2:Test environment and test tools

## Environment

The document test process was developed for use with Microsoft Word 2010.

 Documents must be in an unrestricted “.docx” format.  Testing preconditions (applies to all documents) on page 16.

## Tools: MS Word Panes and Views

 In the test process, this symbol means use a **tool** to find and/or examine elements.

| Tool | Purpose | Open via... | Shortcut |
| --- | --- | --- | --- |
| Navigation Pane | Shows paragraphs set as headings, as well as their levels. | Ribbon > View Tab > Show Group > Navigation Pane. | N/A |
| Styles Pane | Shows the style and/or formatting applied to the current paragraph | Ribbon > Home Tab > Styles Group > Styles () | Ctrl + Alt + Shift + S |
| Reveal Formatting Pane | Shows the underlying settings for selected text (word, sentence, paragraph, table, or section) | Styles Pane > Style Inspector () > Reveal Formatting () | Shift + F1 |
| Show hidden characters | Shows non-printing characters used for formatting (carriage returns, TABs, table cell markers etc.) | Ribbon > Home Tab > Paragraph Group > Show/Hide (¶) | Ctrl + Shift + \* |
| Draft View | Shows the content that is generally read by screen reader technologies (i.e., excludes running headers and footers, and floating images and tables) | View Tab > Document Views > Draft | N/A |
| Print Layout View | Shows the document as it would be printed (i.e., all of the content that should be accessible to the reader) | View Tab > Document Views > Print Layout | N/A |

## Tools: MS Word Accessibility Checker

To open the tool, use File Tab > Check for Issues > Check Accessibility

 In the test process, this symbol means use the **Accessibility Checker Tool** to find and/or examine elements.

 The document must be saved in the ".docx" format, and saved from within MS Word 2010. When saving, the “Maintain compatibility with previous versions of Word” must be unchecked.

 As the table below shows, the Accessibility Checker is used in some of the tests but not all. Some notifications from the Checker do not apply to this test process and should be considered informational or can be ignored.

|  |  |  |
| --- | --- | --- |
| Accessibility checker error (alphabetical order) | Related Baseline Test # | Related Test # (begins page #) |
| Blank Table Rows or Columns | N/A | N/A |
| Check Reading Order | Reading Order, #B2 | 3.2. Tables, p.29 (Alert only) |
| Heading is Too Long  | N/A | N/A |
| Infrequent Headings | N/A | N/A |
| Merged or Split Cells | Data Tables (Cell-Header Association) #B11 | 3.2. Tables, p.29 (Alert only) |
| Missing Alt Text: Picture, Text Box, Other Elements | Images, #B13 | 3.3. Images and other objects, p.33 |
| Missing Alt Text: Tables | Data Tables (Headers) #B10 | 3.2. Tables, p.29 (Note only) |
| No Header Row Specified | Data Tables (Headers) #B10 | 3.2. Tables, p.29 (Alert only) |
| Objects Not Inline | Inline Elements #B1 | 3.3. Images and other objects, p.33 |
| Repeated Blank Characters | N/A | N/A |
| Skipped Heading Level | N/A | N/A |
| Unclear Hyperlink Text | Links and User Controls #B7 | 2.5. Links, p.25 |
| Unstructured Document | Headings #B4 | 2.1. Headings, p.20 |
| Using Image Watermark | N/A | N/A |

## Tools: Color testing

Any of the following tools can be used to compare color contrast:

* [WebAim Color Contrast Anaylzer (http://webaim.org/resources/contrastchecker/)](http://webaim.org/resources/contrastchecker/)
* [Juicy Studio (http://www.paciellogroup.com/resources/contrastAnalyser)](file:///C%3A%5CUsers%5CHolly.Anderson%5CDownloads%5CJuicy%20Studio%20%28http%3A%5Cwww.paciellogroup.com%5Cresources%5CcontrastAnalyser%29)
* [Color Contrast Check (http://snook.ca/technical/colour\_contrast/colour.html)](http://snook.ca/technical/colour_contrast/colour.html)

  4. Color (and other sensory characteristics) formatting, p.37.

# Section 3:Section 508 conformance tests for MS Word 2010

 This **Section 508 Conformance Test Process** is intended for use by Section 508 testers, these documents contain *only* the necessary information for conducting a test of an already-authored, already-formatted document.

 Do you need an **Authoring guide? Guides are available** for people who are authoring documents (creating content and formatting).

 See page 1 for more information.

#### Testing preconditions (applies to all documents)

1) Check file format:  Is the document an MS Word file with a filename extension of “.docx”?

**If yes**, proceed to step 2.

**In no**, the document cannot be checked with this test process.

 Older format MS Word documents (“.doc”) may be converted by the authors to “.docx” format. It is reccomended that authors convert to the newer format and then after testing convert the document back to the older format. Authors are responsible to ensure that formatting conversion alerts do not adversely affect accessibility.

 “Macro-enabled” documents (“.docm”) are used to provide programmed content that behaves like an application. Use a software test process for Macro-enabled documents.  3.5. Reveal Hidden .

2) Check editing restrictions: In the Ribbon, open the Review Tab.
 Is the “Protect Group > Restrict Editing” button highlighted/selected?.

**If no** (i.e. there are no restrictions), proceed with testing the document.

**If yes** (i.e. the document is restriced), restrictions must be deactivated in the
 Restrict Formatting and Editing Pane (Review Tab > Protect Group > Restrict Editing).

 It is possible to restrict or secure a document in a way that interferes with accessibility testing. If the document is restricted, ribbon elements in MS Word will be mostly grayed out. Restrictions prevent the ability to perform the majority of the tests; therefore, it is necessary to turn them off.

 When restrictions are enforced with a password, it may be necessary to obtain the password or an unrestricted document.

### 1. Document formatting

#### 1.1. Form elements

In order to correctly and accurately complete a form, it is necessary to follow instructions, directions and cues, as well as enter information in the correct fields. Non-visual use of a form is facilitated when there is a programmatic association between all relevant instructions, directions and cues and their respective components/controls.

##### 1.1. How to Test

1) Find form elements: Examine the document for the presence of form input components.

 Buttons, text fields, radio buttons, checkboxes, multi-select lists (combo boxes).

 There are other methods to create technically “fillable forms” in MS Word. One example of this uses data tables with empty columns for users to enter their data. Another example uses the underscore text character to signify where to enter data:
 Your First Name: \_\_Fred\_\_\_\_.

2) Inspect and Determine: Check to see if fields are fillable. Use the keyboard and mouse to: fill in text fields (such as name), select radio buttons or check boxes, use dropdown (combo) boxes, update any other type of form field.

Screen Reader users do not have access to logically read and fill in enabled forms in MS Word. If the document contains fillable forms, the documents should be returned to authors without completing the rest of the baseline tests.

##### 1.1. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Enabled Form components are found[22(n); 31(a); 31(b); B20] | Test ID always applies. [DNA] is not an acceptable result. | [NC] if any enabled form elements are present. | [C] if there are no enabled form elements. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

22(n) Labels for forms. When electronic forms are designed to be completed on-line, 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.

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B20. Forms. Labels, instructions, directions and cues necessary to complete a form must be programmatically or textually associated with their respective input control.

#### 1.2. Document Title

People with disabilities rely on a descriptive filename to locate, open and switch between documents and applications during work tasks.

##### 1.2. How to Test

1) Find document title: Locate the filename in Windows Explorer or the title bar in MS Word.

2) Inspect and Determine: Check that the filename identifies the document or describes the purpose of the content.

 It is good practice for authors to set other relevant attributes and information fields (such as full document title, author, subject matter, keywords / tags, etc.) in Document Properties. However, this is not part of the Section 508 or Baseline tests.

##### 1.2. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. No descriptive document filename.[31(a); 31(b); B3] | Test ID always applies. [DNA] is not an acceptable result. | [NC] if the filename does not identify the document or does not describe the purpose of the content. | [C] if the filename identifies the document or describes the purpose of the content. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B3. Document Title (Filename). The filename must identify the document or its purpose.

#### 1.3. Language of the document (Reserved)

Documents can be marked as a specific language. Screen reader AT access the language setting to provide the appropriate pronunciation.

 The document language cannot be set in MS Word, because there is no setting that defines “the” language. This test does not apply for MS Word documents, so it is marked “Reserved” for future use if the situation ever changes.

 While there is an option in MS Word to “Set the proofing language” (Review Tab > Language Group > Language), this is an editing-environment setting only, and does not “travel” with the document.

 Although this option is always “Not Applicable,” there is not an accessibility issue so long as (a) end-users do not change the default settings to anything other than “detect language automatically” (Review Tab > Language Group > Language Button > Set Proofing Language) and (b) they change the default option which is to set their screen reader AT to detect language changes automatically.

##### 1.3. How to Test

 There is no test for language of the document

 2.4. Language of sections

##### 1.3. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. There is no language set for the document[21(d); 31(a); 31(b); B6] | [DNA] is always the result for this test ID. | This test ID does not apply. [NC] is not an acceptable result. | This test ID does not apply. [C] is not an acceptable result. |

 Enter *[DNA]* into the reporting tool.

###### Applicable 508 Standards 1194.XX

21(d) Name, Role, State. Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B6. Document Language. The document language must be programmatically identified.

### 2. Text formatting

#### 2.1. Headings

Programmatic formatting provides AT a means to identify the presence of a heading and its outline level.

 This requirement does not imply that headings be required; it means that where headings are present, they must be programmatically identified

 This requirement should not be construed to require headings in place of headers in data tables.

##### 2.1. How to Test

1) Find headings: Find where formatting has been used to logically divide and structure the document. Visually identify where headings are used in a document through text formatting, use of white space, boxes or other visual separators.

2) Inspect and Determine headings:  **Is the document longer than 1200 words?**

**Longer than 1200 words:**  “Unstructured Document” will show if headings are not set correctly on a long document.

  Word count can be accessed from the MS Word status bar, which runs along the bottom of the active window.

**Shorter documents:**  Navigation Pane (View Tab > Show Group > Navigation Pane). The headings in the Navigation Pane should be selectable to go to any heading in the document. Verify that all headings found in Step 1 are reachable via the Navigation Pane.

 Using built-in or custom headings based on “Heading 1”, “Heading 2” etc. is a best practice. However, this is not a requirement.

3) Inspect and Determine heading structure:  Navigation Pane (View Tab > Show Group > Navigation Pane). The hierarchy of the headings in the document should be indicated in the **Navigation Pane**. The hierarchy should match the visual outline level of the headings found in Step 1.

 If it is difficult to verify the heading level with the Navigation Pane, the heading “Outline Level” of a paragraph can also be verified using the  Reveal Formatting Pane (Shift + F1).

##### 2.1. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Visually apparent headings are not programmatically identified.[31(a); 31(b); 31(f); B4] | [DNA] if there are no headings used to logically divide and structure the document.  | [NC] if any visually apparent headings are not also programmatically identified. | [C] if all visually apparent headings are programmatically identified. |
| B. Programmatically identified heading levels do not match the visual outline level.[31(a); 31(b); 31(f); B4] | [DNA] if there are no programmatically identified headings.  | [NC] if the outline level of any programmatically identified heading does not match its visual outline level. | [C] if the outline level of all programmatically identified headings matches their visual outline level. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

31(f) Use With Physical Limitations. At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.

###### Applicable Baseline Requirements

B4. Headings. Headings must be programmatically identified and must match the visual outline level.

#### 2.2. Lists

Lists that are programmatically identified provide equivalent functionality (such as knowing the list length and understanding relationships between levels) for use with screen reader AT.

##### 2.2. How to Test

1) Find lists: Look for visually apparent lists of items:

 Using text bullet characters (“• Apples”)

 Using images for bullets (“ Oranges”),

 Using numbers (“12. “Pineapples”)

 Using multi-level items with a hierarchy (“12.c.xi. Dried Pineapple Slices”).

2) Inspect and Determine: Select various list items in the document.  Reveal Formatting pane (SHIFT + F1). If the list is programmatically set, the Reveal Formatting Pane will contain information under the “Bullets and Numbering heading”.

##### 2.2. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Lists are not programmatically identified.[31(a); B8] | [DNA] if there are no visually apparent lists in the document. | [NC] if any list items are not programmatically identified. | [C] if all list items are programmatically identified. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

###### Applicable Baseline Requirements

B8. Lists. Bulleted, numbered, and multi-level lists must be programmatically identified.

#### 2.3. Columns

Text and objects must be placed so that there is a match between their intended and programmatic reading order.

##### 2.3. How to Test

1) Find columns: Examine the document to find text in columns.

 Column formatting will show up visually when using Print Layout View (View Tab > Document Views Group > Print Layout). Columns may exist but not show as colums in some other views.

2) Inspect and Determine: Open the  Reveal Formatting Pane (Shift + F1). Place the keyboard cursor in any text that has column layout. If the text is correctly formatted there will be information under ‘Section / columns’ or ‘Table’ in the Reveal Formatting Pane.

 Improperly formatted columns can include (but are not limited to) using spaces or Tab characters to achieve spacing, or usuing Table formating)

 Table formatting for columnar text is also subject to the Table layout formatting test ( 3.2. Tables).

##### 2.3. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Text in columns is improperly formatted (uses spaces or Tab characters instead of column formatting)[31(a); B2] | [DNA] if there is no text in visually apparent columns | [NC] if for any column, appropriate information does not show in the Reveal Formatting Pane. | [C] if all columns have been created using proper formatting. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

###### Applicable Baseline Requirements

B2. Reading Order. The visual and/or logical reading order of meaningful content must be programmatically maintained.

#### 2.4. Language of sections

Sections can be marked as a specific language. Screen reader AT accesses the language setting to provide the appropriate pronunciation.

##### 2.4 How to Test

1) Determine the document language: Identify the intended and predominant language of the document.

2) Find language changes: Identify any sections (words, phrases, sentences, paragraphs etc.) that differ from the intended and predominant language.

3) Inspect and Determine: Select the section of text. . Proofing Language Tool (Review Tab > Language Group > Language Button > Set Proofing Language). Check that the highlighted language matches the actual language of the section.

 The language setting for the passage can be shown in the  Reveal Formatting Pane (Shift + F1). However, if there are multiple language settings in the document, the information in the Reveal Formatting Pane is unreliable.

 1.3. Language of the document (Reserved)

##### 2.4. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. The intended and predominant language for sections is not programmatically identified.[31(a); B5] | [DNA] if there are no sections that differ to the predominant language of the document. | [NC] if any section that differs from predominant language of the document is not programmatically identified. | [C] if all sections that differ from predominant language of the document are programmatically identified. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

###### Applicable Baseline Requirements

B5. Section Language. Sections that use language other than the default must be programmatically identified (except for proper names, technical terms, or foreign words that have become part of the vernacular).

#### 2.5. Links and User Controls

It is important to provide unambiguous names or context for link and user controls so that AT can correctly identify information.

 **User Controls** are considered the same as “links” for testing purposes. However, if controls for manipulating media or revealing hidden content are part of MS Word, they would not be tested here as document elements (they would instead be tested as part of a software testing process). If such controls are generated as document elements, they should be tested here as “links”.

##### 2.5. How to Test

1) Find links: Examine the content for the presence of links.  Find and Replace Tool (Ctrl + G> Field button > Hyperlink (from drop down list)) or  “Unclear Hyperlink Text”

 Hovering over a link with a mouse pointer shows a message with the link address and “Ctrl+Click to follow link”.

 Include internal links such as Tables-Of-Contents, index and glossary links etc.

2) Inspect and Determine: Check that each link/user control in the document has a unique text name that describes the destination, function, and/or purpose of the control or that such functions are determinable within context.

 **Uniquely named links:**
“Further details are provided in the [Company annual report](http://doodahdoodah.com/CAR). Supplemental information is in the [annual report annex](http://doodahdoodah.com/CARX).”

 **Links determinable within context:**
“[Further details](http://doodahdoodah.com/CAR) are provided in the Company annual report. [Supplemental](http://doodahdoodah.com/CARX) information is in the annual report annex.”

 **Links not uniquely named and not deteminable within context:**
“Further details are provided in the Company annual report. Supplemental information is in the annual report annex.
[Here](http://doodahdoodah.com/CARX) | [Here](http://doodahdoodah.com/CARX).”

 The Accessibility Checker will only highlight links that are coded as URLs.
 The checker will not reveal multiple instances of non-unique link names ( ‘Click here’, ‘Click here’, ‘Click here’).

 If an image is formatted as a link, the alt-text can contain the link purpose, function, or destination.  3.3. Images and other objects.

 Documents that are also meant to be published in print form must be allowed to use the full URL address (otherwise the printed versions will become unstable for all readers).

##### 2.5. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. The destination, function, and/or purpose of a link/control is not conveyed in the screen text or link name.[31(a); 31(b); B7] | [DNA] if there are no links/controls in the document. | [NC] If the destination, function, and/or purpose of any link/control is not conveyed in the screen text or link name. | [C] If the destination, function, and/or purpose of all links/controls are conveyed in the screen text or link name. |
| B Each link/control is not uniquely identified.[31(a); 31(b); B7] | [DNA] if there is only one link or no links in the document. | [NC] if any link/control is not uniquely identified. | [C] if all links/controls are uniquely identified. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B7. Links and User Controls. The distinct destination, function or purpose of links and user controls must be described in the link/control name or surrounding text.

### 3. Object formatting

#### 3.1. Running headers, footers and watermarks

Watermarks and other content placed in running headers and footers are by default not read by screen reader AT. When vital information (such as “CONFIDENTIAL; DO NOT DISTRIBUTE”) appears at least once at or near the start of the related information in the main content area it will be read by screen reader AT.

 “**Vital information**”: In determining if the information is “vital”, consider if the reader will be negatively impacted if they do not read or are never aware of the information.

 If a user cannot see a “TOP SECRET” watermark, they will not know the sensitivity of the information and be significantly and adversely impacted if they share the information with others.

##### 3.1. How to Test

1) Find Running Headers and Footers: Examine the document for user-generated running header, running footer, or watermark information ( Respond by *X date*, Confidential, Do Not Distribute).

 Running headers and running footers show grayed out on screen in Print Layout view (View Tab > Document Views Group > Print Layout). If in doubt as to whether something is in the header or footer, go in to ‘edit’ it (Insert Tab > Header & Footer Group > Header/Footer)

2) Find Watermarks: Examine the document for user-generated watermarks (either text or images).

3) Inspect and Determine: Check that vital information contained in the Running Header, Running Footer, and any Watermarks is also located at or near the start of the related information in the main content area.

 Page numbers are not considered vital as screen reader users can query the application for the current page number.

 Running Header and Footer content does not need to be inline.

 In checking watermarks for contrast, the watermark counts as the background (see 4. Color (and other sensory characteristics) formatting).

##### 3.1. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Vital information in running headers, running footers, or watermarks is not located at or near the start of the related information in the main content area.[31(a); B12] | [DNA] if there are no running headers, no running footers, and no watermarks. | [NC] If any vital information in running headers, running footers, or watermarks is not located at or near the start of the related information in the main content area. | [C] If all vital information in running headers, running footers, or watermarks is located at or near the start of the related information in the main content area. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

###### Applicable Baseline Requirements

B12. Running Headers, Footers, and Watermarks. Vital information contained in running headers and footers or watermarks must also be located at or near the start of the related information in the main content area.

#### 3.2. Tables

To understand data stored in a cell, or in groups of cells, it is necessary for the reader to be able to connect the data with the information in one or more headers. When programmatic formatting is properly applied, it becomes possible for screen readers users to access the same logical data-header content relationships that are typically provided via visual formatting.

To understand data stored in a cell of a complex data table, it is necessary for the reader to be able to connect the data with the information in more than one header. When programmatic formatting is properly applied to complex data tables, it becomes possible for screen readers users to access the same logical data-header content relationships that are typically provided via visual formatting.

Additionally, text and objects can be formatted as inline or floating/wrapping. Floating text and objects such as tables are not accessible via the keyboard cursor and therefore not accessible to AT users.

Furthermore, text and objects such as tables must be placed so that there is a match between their intended and programmatic reading order.

##### 3.2. How to Test

1) Find layout tables: Examine the document for text content that has irregular layout, to determine whether table formatting has been used for visual layout purposes. Place the keyboard cursor in any text that has irregular layout.  Reveal Formatting Pane (Shift + F1). If there is content under the ‘Table’ section of the Reveal Formatting Pane then tables have been used for layout.

  “Check Reading Order”: If tables are used for layout, the error ‘Check Reading Order’ may display. However, this check only displays when the table is formatted with ‘Table Normal’ style and not with ‘Table Grid style’. The application and setting of the different styles is hidden from most authors, so they do not know what this setting is and whether it is set ‘correctly’. Therefore, the manual check in Step 6, below, should be used to check reading order.

2) Find data tables: Data tables are those tables where the information in a cell requires a row or column header to adequately describe the cell's contents.

3) Identify complex data tables: For any data table found in Step 2, identify whether it is a ‘complex’ data table. Complex data tables are defined as those that have two or more levels of headers and/or include split or merged cells.

  ‘Merged or Split Cells’. The Accessibility Checker can be used to assist in finding merged or split cells but cannot identify if two or more levels of headers are present.

4) Inspect and Determine if tables are actually images: It is possible to make an image of a layout or data table. However, an image of a data table will render subsequent test steps 6, 7, and 8 impossible (and therefore fail those steps). Select the table. If Picture Tools shows in the Ribbon, then the table is an image.

 Alternate text cannot be used to pass this test.

5) Inspect and Determine whether tables are inline: Compare the view of the document between Print Layout view (View Tab > Document Views > Print Layout) and Draft View (View Tab > Document Views > Draft). Tables that do not show in Draft view are not inline.

6) Inspect and Determine the order of layout tables: Place the cursor in the first cell of the layout table (upper left). Use the Tab key to move between the table cells. Check that the Tab order matches the visual/logical order of the content.

 Using the Tab key beyond the last cell in the table will cause a new table line to appear.

7) Inspect single column and/or row data table headers:
 Is there more than one header column or header row? If yes, the table is ‘complex’ so skip this step and move to Step 8.

**Single column headers in table:** If the first row of the table contains headers for each column,  Reveal Formatting Pane (Shift + F1). Place the cursor anywhere in the text of the first row. Check that the Table Row property is set as “Repeat as Header Row”
  ‘No Header Row Specified’. The accessibility checker in MS Word 2010 includes a check only for the first row of data tables. However, this check only displays when the table is formatted with ‘Table Grid’ style, and not with ‘Table Normal style’. The application and setting of the different styles is hidden from most authors, so they do not know what this setting is and whether it is set ‘correctly’. Therefore the automated check is unreliable as a test, and the manual check should be used instead.

**Single row headers in table:** Column and row header cells of data tables must be programmatically identified. If the first column of the table contains headers for each row, there is no programmatic setting for this in MS Word.

8) Inspect complex data tables: Check for the presence of Merged or Split Cells. A visual inspection may reveal this, or to examine each data cell: Use the Tab key to move between the table cells. Check that while Tabbing the cursor count does not have a different number of cells to other rows and columns (a different number would indicate the presence of merged or split cells).

 You can also show the table gridlines by selecting Table Tools Layout Tab > Table Group > View Gridlines button as a way to verify.

 Data cells in complex data tables must be associated with their corresponding column and row headers. If the data table is ‘complex’, there is no programmatic setting for this in MS Word.

 If there are complex data tables, or data tables with a single column of row headers, then either the document must be edited by the authors, or the document must be converted to an accessible format.

 Data Table captions (the name of the table) located immediately prior to or following the table and programmatically linked a good practice but is not part of the test.

  ‘Missing Alt-Text: Tables’. The accessibility checker includes an alt-text test for tables. It is good practice to include a description of the table structure, especially for complex tables, but is not part of the test.

##### 3.2. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. An image of a table is found.[22(g);22(h); B10] | [DNA] if there are no tables used. | [NC] if there is an image of a table. | [C] if all tables are formatted as tables. |
| B. A table is not inline.[21(a); 31(a); 31(b); B1] | [DNA] if there are no tables used. | [NC] if any table is not inline. | [C] if all tables are inline. |
| C. The reading (Tab) order of text formatted with table layout does not match the visual/logical order.[31(a); B2] | [DNA] if there are no layout tables used. | [NC] if there is a mismatch between the reading (Tab) order of text formatted with table layout and the visual/logical order. | [C] if there is a match between the reading (Tab) order of text formatted with table layout and the visual/logical order. |
| D. A data table with only one header row is not marked as “Repeat as Header Row”.[22(g); B10] | [DNA] if there are no data tables with only one header row. | [NC] if the first row of any data table with only one header row is not marked as “Repeat as Header Row” | [C] if the first row(s) of all data tables with only one header row are all marked as “Repeat as Header Row” |
| E. A data table has more than one row of column headers, OR has column(s) containing row headers.[22(g); 22(h); B10] | [DNA] if there are no data tables with more than one row of column headers, OR with column(s) containing row headers. | [NC] if there are data tables with more than one row of column headers, OR with column(s) containing row headers. | There is no programmatic way to achieve this in MS Word. [C] is an inappropriate response. |
| F. A complex data table has merged or split cells.[22(g); 22(h); B11] | [DNA] if there are no complex data tables with merged or split cells. | [NC] if there are complex data tables with merged or split cells. | There is no programmatic way to achieve this in MS Word. [C] is an inappropriate response. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

22(g) Data Table Headers. Row and column headers shall be identified for data tables.

22(h) Complex Data Tables. Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B1. Inline Elements. Meaningful text and objects must be placed inline.

B2. Reading Order. The visual and/or logical reading order of meaningful content must be programmatically maintained.

B10. Data Tables (Headers). Header cells must be programmatically identified in data tables.

B11. Data Tables (Cell-Header Association). Data cells must be programmatically identified with their associated header cells in complex tables.

#### 3.3. Images and other objects

Screen reading AT can access text but cannot automatically interpret the meaning of images and other objects. Providing text equivalents for images and other objects provides users of screen reader AT the intended meaning of a document’s content.

Additionally, images and objects can be formatted as inline or floating/wrapping. Floating images and objects are not accessible via the keyboard cursor and therefore not accessible to screen reader users.

Furthermore, images and objects must be placed so that there is a match between their intended and programmatic reading order.

##### 3.3. How to Test

1) Find objects: Find objects such as pictures/images ( text rendered as an image, shapes, charts, SmartArt, text boxes etc.). Note whether images contain meaningful content or are decorative (  borders, accent stripes etc.).

2) Inspect and Determine whether meaningful objects are inline: ‘Object not inline’.

 In MS Word, text that is not part of an object is always placed inline.

 Decorative objects do not need to be inline.

 Running Header and Footer content and watermarks do not need to be inline ( 3.1. Running headers, footers and watermarks).

4a) Inspect and Determine whether **meaningful** images and objects have **associated** text descriptions. The associated text description can be located in one of three places. Examine the following in sequence:

**Check alt-text:** Use the manual or automated testbelow:

 **Manual test:** Select the image or object. Open the context menu (right click). Select Format Picture, and open the Alt Text part of the dialog box. Check that there is descriptive text in the Description field (ignore the Title field).

 **Automated test:** ‘Missing Alt Text’.

**Check the caption:** Examine any caption associated with the object for a text description.

**Check the text on the page:** If there is no caption, examine the surrounding text (either before or after) a description.

4b) Inspect and Determine whether **meaningful** images and other meaningful objects have **appropriate** text descriptions: Examine the descriptive text found in Step 4a to determine whether the purpose and/or function of the object has been conveyed for all meaningful objects.

 Alt-text should be 250 characters or less. For complex images, it is a best practice to contain the description in the body of the document or an appendix.

 If text has been rendered as an image, check whether the descriptive text matches verbatim. Text rendered as an image needs to also be tested for color contrast.  4. Color (and other sensory characteristics) formatting.

 Images of scanned text should be converted to accessible text.

5) Inspect and Determine whether **decorative** images have **null** text descriptions: Examine the descriptive text on decorative images. There must be either a blank space character for the alt-text or double-quote plus space plus double-quote (“ ”).

‘Missing Alt Text’. Even if an image is decorative, the Accessibility Checker will flag it as an error even though it should not contain alt-text.

##### 3.3. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A Meaningful or objects are not inline.[21(a); 31(a); 31(b); B1] | [DNA] if there are no meaningful objects. | [NC] if any meaningful text or objects are not inline. | [C] if all meaningful text and objects are inline. |
| B. The purpose and/or function of a meaningful object is not conveyed in descriptive text.[22(a); B13] | [DNA] if there are no meaningful objects. | [NC] If the purpose and/or function of any meaningful object is not conveyed in descriptive text. | [C] If the purpose and/or function of all meaningful objects is conveyed in descriptive text. |
| C. The descriptive text on text rendered as an image does not match verbatim[22(a); B13] | [DNA] if there is no text rendered as an image. | [NC] If the descriptive text on any text rendered as an image does not match verbatim | [C] If the descriptive text on all text rendered as an image matches verbatim |
| D. Alt-text contains a description on a decorative object.[22(a); B13] | [DNA] if there are no decorative images. | [NC] if any decorative objects contain alt-text. | [C] if all decorative objects contain a blank / null alt-text. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

21(a) Keyboard Accessibility. When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.

22(a) Text Descriptions. A text equivalent for every non-text element shall be provided (e.g., via “alt”, “longdesc”, or in element content).

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

###### Applicable Baseline Requirements

B1. Inline Elements. Meaningful text and objects must be placed inline.

B13. Images and Other Objects. All meaningful objects must have text describing their purpose or function.

#### 3.4. Flashing

A component that flashes or blinks in the visual field can cause adverse reactions in people who have photosensitive epilepsy. It is well established that objects flickering in the frequency range from 3Hz to 55Hz should be avoided.

 The Baseline Test for flashing is marked “Reserved” because there is no universally agreed-upon test. However, agencies are obliged to include a test for flashing to reduce the likelihood of causing a seizure in a user with photosensitive epilepsy. It is therefore incumbent on agencies to apply due diligence to try to lower the likelihood of causing injury. The test herein may be used as a test solution, or agencies must use their own test solution.

 The term 'flickering' encompasses objects that flash, blink, flicker repetitively, or elements that scroll (e.g., marquee text). Due to factors that are not within the developer's control (such as the refresh frequency of a user's monitor, Internet speed, and other display factors), the frequency of a flashing object can be unpredictable from computer to computer. Given this uncertainty, the only specification that can be inspected is the programmed frequency of flashing objects. Flashing objects that do not have a frequency property or attribute will be found not conformant.

 Current Section 508 requirements do not permit elements to flash or flicker at frequencies between 2Hz and 55Hz. To incorporate the expected update to this requirement, this flashing test adopts the WCAG 2.0 frequency restriction to below 3Hz.

##### 3.4. How to Test

1) Find flashing objects: Visually check for any flashing or blinking interface objects or scrolling text.

 Scrolling images should be tested under 5.2. Video-only.

2) Inspect and Determine: Determine the programmatic frequency of the flickering objects. This will require finding the object’s properties and/or contacting the document’s author.

##### 3.4. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. The frequency of a flickering element cannot be determined programmatically.[21(k); B9] | [DNA] if there are no elements that are flashing, flickering, scrolling, etc. | [NC] if the frequency of a flickering element cannot be determined programmatically. | [C] if the frequency of all flickering elements can be determined programmatically. |
| B. The frequency of a flickering element cannot be determined programmatically.[21(k); B9] | [DNA] if there are no elements that are flashing, flickering, scrolling, etc. [DNA] if the frequency is not programmatically set. | [NC] if the frequency of a flickering element is programmatically set at or above 3Hz. | [C] if the frequency of all flickering elements are programmatically set below 3Hz. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

21(k). Flashing. Software shall not use flashing or blinking text, objects, or other components having a flash or blink frequency greater than 2 Hz and lower than 55 Hz

###### Applicable Baseline Requirements

B9 Flashing (Reserved). Sections(s) of the document should not flash at or above 3Hz.

#### 3.5. Reveal Hidden Content

Some components can be intentionally hidden to reduce visual clutter, requiring a user action to reveal the content. Providing focus changes to the revealed content or describing the changes ensures that screen reader AT users will have access to the information as intended by the author.

##### 3.5. How to Test

 There is no test for Revealing Hidden Content.

 In order to produce content that is hidden and can be revealed by user actions, special formatting has to be programmed into the document ( using Visual Basic, using Macros). Such formatting will only work in a ‘Macro-enabled document’ that will have a ‘.docm’ or ‘.dotm’ extension. However, this test process is only for ‘.docx’ documents. Therefore, this test process does not apply. Adding programmed formatting to a document effectively turns it into a software application. Software applications should be tested using appropriate software testing methods.

 Several other types of element in MS Word could be considered ‘hidden’ but they are specifically *not included* in this test:

 Text that is formatted as ‘hidden’. Published documents generally do not included hidden text, as it is hidden from all users.

 ‘Balloon comments’. The system of adding comments in MS Word allows them to be shown as balloon comments to the side of the main content, or in list form in the Revisions Pane. Published documents generally do not included these types of comments.

 Links that open other external documents (other MS Word files, HTML URLs etc.)

##### 3.5. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Interface components that reveal hidden content/objects are found[31(a); 31(b); B21] | [DNA] is always the result for this test ID. | This test ID does not apply. [NC] is not an acceptable result. | This test ID does not apply. [C] is not an acceptable result. |

 Enter *[DNA]* into the reporting tool.

###### Applicable 508 Standards 1194.XX

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B21. Focus (Revealing Hidden Content). Components that reveal hidden content (text boxes, thumbnail images, call-outs, comments, light boxes, pop-ups etc.) must either (i) shift focus to the content they reveal, or (ii) the component must describe that a change to the content will occur if selected.

### 4. Color (and other sensory characteristics) formatting

Having a higher level of contrast between foreground text and the background results in more people will being able to see and use the content.

When information is being conveyed by sensory characteristics such as color, size, shape and location it must also be available in a textual format so that it can be accessed by users who are blind, low-vision or colorblind.

##### 4. How to Test

1) Find color contrast test candidates: Visually examine text or images of text displayed on the page for areas that may have low background to foreground contrast. Include screen text, links, images of text (including text in background images and watermarks), table data cells, etc.

2) Inspect and Determine color contrast:  Tools: Color testing ( p14.) Perform a color contrast test on items to ensure that there is sufficiently high contrast for text:

 Text in foreground versus background colors or images; Links (especially visited links that may be grayed out); Text in images; Text in foreground versus background images; table headers and data cells (text versus background fill).

 For **standard text**, the minimum contrast ratio is **4.5:1**

 For **large text,** the minimum contrast ratio is **3:1**. (Large text is defined here as 14pt bold font or larger, or 18pt regular font or larger.)

 Exclude incidential text, text overlaid on images, and logotypes.

 Objects in Running Headers and Footers do not need to be tested for color contrast. Watermarks do need to be tested.  The watermark should not interfere with the foreground text, as can happen when there is too little contrast.

3) Find where sensory characteristics have been used to convey meaning: Sensory characteristics include color, shape and location. Find where sensory characteristics have been used to convey meaning, indicate an action, or prompt a response.

 Text color (Red text = Alert);

 Images, charts and diagrams ( = Critical response required);

 Links and user controls (Blue links = optional; Red links = obligatory)

 Data table cell contents (Yellow cells = Executive decision required)

4) Inspect and determine whether sensory characteristics usage has redundant screen text: Where sensory characteristics are used to convey meaning, determine if meaning is also present via screen text.

 ***Alert!*** Comments are due tomorrow.

  4th Quarter figures analysis *[critical response required]*;

 Check your work... Knowledge check {optional}; Examination {obligatory};

 Option 1: $2M/24 months; Option 2: $3M/18 months (Executive decision required)

##### 4. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Contrast ratio for text and images of text is less than 4.5:1 (3:1 for large text), except for incidental text, text overlaid on images, and logotypes.[31(b); B15] | There will always be text or other objects on a background. [DNA] is not an acceptable result. | [NC] if the contrast ratio for any text or images of text is less than 4.5:1 (3:1 for large text), except for incidental text, text overlaid on images, and logotypes.. | [C] if the contrast ratio for all text and images of text is at least 4.5:1 (3:1 for large text), except for incidental text, text overlaid on images, and logotypes.. |
| B. Information conveyed through color is not conveyed textually.[22(c); B14] | [DNA] if color is not used to convey meaning. | [NC] if any information conveyed through color is not conveyed textually. | [C] if all information conveyed through color is also conveyed textually. |
| C. Information conveyed through a sensory characteristic (other than color) is not conveyed textually.[31(a); 31(b); B14] | [DNA] if sensory characteristics (other than color) are not used to convey meaning. | [NC] if any information conveyed through sensory characteristics (other than color) is not conveyed textually. | [C] if all information conveyed through sensory characteristics (other than color) is also conveyed textually. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

22 (c) Color Dependence. Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.

31(a) Use Without Vision. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.

31(b) Use With Low vision. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.

###### Applicable Baseline Requirements

B14. Color and Other Sensory Characteristics. Information conveyed through sensory characteristics (such as color, size, shape, and location) must also be provided in text.

B15. Color (Contrast). Text and Images of text must have contrasting colors/shades at a ratio of 4.5:1 for discerning between background and foreground and at a ratio of 3:1 for large text (14pt bold or 18pt regular). Exclude incidental text, text overlaid on images, and logotypes.

### 5. Media formatting

#### 5.1. Audio-only

Providing a text only version of what is being said and/or a description of the relevant sounds gives equivalent access to the content for people who are deaf or hard of hearing.

 MS Word does not include any native controls for playing media. The controls will most likely be part of an embedded player’s file ( Flash).  Testing of media players is usually a software test of the plug-in.

##### 5.1. How to Test

1) Find audio-only content): Find interface components that play meaningful audio-only content when activated. Look for links, controls (buttons), audio file icons etc. Find any audio content that plays automatically ( upon opening a document).

 An audio-only file may be stored in a synchronized media format ( a speech is stored in a file where the video is simply a static graphic of the speaker's name and location). If the video component is static, and the information displayed in the video is also available as screen text, then treat the file as audio-only.

 Other short sounds such as confirmation beeps and error notifications are not included in this requirement.

 ‘Decorative’ audio would include background music that conveys no meaningful content.

2) Inspect and Determine: Check that the transcript is accessible screen text (i.e., an image of a transcript with no ALT-text would not be sufficient to pass this test). Open the transcript and play the audio-only content. Check that the information in the transcript is an accurate and complete representation of the audio-only content. Note the inclusion or absence of relevant associated sounds in addition to any dialogue/narration, such as doors banging or sirens wailing.

 If audio is synchronized with video, slides, animations, or other time-based visual media, then use the synchronization test instead (5.3. Synchronized media).

##### 5.1. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Audio-only content is not accompanied by a transcript.[22(a); B16] | [DNA] if there is no audio-only content, or if audio-only content is ‘decorative’. | [NC] If any audio-only content is not accompanied by a transcript. | [C] If all audio-only content is also accompanied by transcripts. |
| B. Audio-only content is accompanied by a transcript that is inaccurate or incomplete.[22(a); B16] | Condition. [DNA] if there is no audio-only content, or if audio-only content is ‘decorative’.. | [NC] if any audio-only content is accompanied by a transcript that is inaccurate or incomplete. | [C] if all audio-only content is accompanied by transcripts that are accurate and complete. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

22(a) Text Descriptions. A text equivalent for every non-text element shall be provided (e.g., via “alt”, “longdesc”, or in element content).

31(c) Use Without Hearing. At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for assistive technology used by people who are deaf or hard of hearing shall be provided.

###### Applicable Baseline Requirements

B16. Audio (Transcripts). Meaningful audio-only content must be accompanied by a text transcript.

#### 5.2. Video-only

Providing a text only version of what is being shown and/or a description of the relevant video gives equivalent access to the content for people who are blind or low vision.

 MS Word does not include any native controls for playing media. The controls will most likely be part of an embedded player’s file ( Flash).  Testing of media players is usually a software test of the plug-in.

##### 5.2. How to Test

1) Find video-only content): Find interface components that play meaningful video-only content when activated. Look for links, controls (buttons), video file icons etc. Look for links, controls (buttons), audio file icons etc. Find any video content that plays automatically ( upon opening a document).

 A video-only file may be stored in a synchronized media format ( an animation is stored in a file where the audio is absent or can be considered incidental such as background music that does not influence the comprehension of the animation). If the audio component is absent or incidental, then treat the file as video-only.

 ‘Decorative’ video includes background images that convey no meaningful content.

2) Inspect and Determine: Check that the description is either accessible screen text (i.e., an image of a description with no ALT-text would not be sufficient to pass this test), or an audio file. Open the description and play the video-only content. Check that the information in the description is an accurate and complete representation of the video-only content.

 If video is synchronized with audio, meaningful sounds, narration, or other time based visual media, then use the synchronization test instead (5.3. Synchronized media).

##### 5.2. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. A video-only file does not have a description.[21(h); B16] | [DNA] if there is no video-only content, or if video-only content is ‘decorative’. | [NC] If any video-only content is not accompanied by a description. | [C] If all video-only content is also accompanied by descriptions. |
| B. A video-only file has text descriptions that are inaccurate or incomplete.[21(h); 22(a); B16] | Condition. [DNA] if there is no video-only content, or if video-only content is ‘decorative’, or if the video-only content is accompanied by an audio description. | [NC] if any video-only content is accompanied by a text description that is inaccurate or incomplete. | [C] if video-only content is accompanied by text description that are accurate and complete. |
| C. A video-only file has audio descriptions that are inaccurate or incomplete.[21(h); 24(d); B16] | Condition. [DNA] if there is no video-only content, or if video-only content is ‘decorative’, or if the video-only content is accompanied by a text description. | [NC] if any video-only content is accompanied by an audio description that is inaccurate or incomplete. | [C] if video-only content is accompanied by audio descriptions that are accurate and complete. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

21(h) Animation. When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.

22(a) Text Descriptions. A text equivalent for every non-text element shall be provided (e.g., via “alt”, “longdesc”, or in element content).

24(d) Audio Descriptions. All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.

###### Applicable Baseline Requirements

B17. Video (Descriptions). Meaningful video-only content must be accompanied by a description.

#### 5.3. Synchronized media

Providing time-synchronized captions of what is being said, and/or a description of the relevant sounds gives equivalent access to the multimedia content for people who are deaf or heard of hearing.

Providing time-synchronized audio descriptions of what is being said, and/or a description of the relevant visual events gives equivalent access to the multimedia content for people who are blind or low vision.

 MS Word does not include any native controls for playing media. The controls will most likely be part of an embedded player’s file ( Flash).  Testing of media players is usually a software test of the plug-in.

##### 5.3. How to Test

1) Find synchronized media: Find interface components that play synchronized media when activated. This includes embedded media files, and links to streaming live events. Find any synchronized media content that plays automatically ( upon opening a document).

 A synchronized media file may be used to store a non-synchronized media format ( notes under 5.1. Audio-only and 5.2. Video-only).

2) Inspect and Determine captions: Enable the captioning for the synchronized media. Play the synchronized media content. Check that the information in the captions is an accurate, synchronized and complete representation of the dialogue and other relevant sounds in the synchronized media.

 A transcript that would pass test 5.1. Audio-only would not pass this test.

3) Inspect and Determine audio descriptions: Enable the audio descriptions for the synchronized media. Play the synchronized media content. Check that the audio description is an accurate, synchronized and complete representation of the relevant visual events in the synchronized media.

 A separate text description or a separate audio-only file that would pass test 5.2. Video-only would not pass this test.

##### 5.3. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. Synchronized media does not have captions.[24(c); B18] | [DNA] if there is no synchronized media. | [NC] if any synchronized media does not have captions. | [C] if all synchronized media has captions. |
| B. Synchronized media has captions that are inaccurate or incomplete.[24(c); B18] | [DNA] if there is no synchronized media. | [NC] if any synchronized media has captions that are inaccurate or incomplete. | [C] if all synchronized media has captions that are accurate and complete. |
| C. Synchronized media has captions that are not synchronized with dialog and relevant sounds.[22(b); B18] | [DNA] if there is no synchronized media. | [NC] if any synchronized media has captions but they are not synchronized with the dialog and relevant sounds. | [C] if all synchronized media has captions and they are synchronized with the dialog and relevant sounds. |
| D. Synchronized media is not audio described.[24(d); B19] | [DNA] if there is no synchronized media. | [NC] if any synchronized media does not have audio descriptions. | [C] if all synchronized media has audio descriptions. |
| E. Synchronized media is audio described, but the descriptions are inaccurate or incomplete.[24(d); B19] | [DNA] if there is no synchronized media. | [NC] if any synchronized media has audio descriptions that are inaccurate or incomplete. | [C] if all synchronized media has audio descriptions that are accurate and complete. |
| F. Synchronized media is audio described, but the descriptions are not synchronized with video.[22(b); B19] | [DNA] if there is no synchronized media. | [NC] if any synchronized media has audio descriptions but they are not synchronized with the dialog and relevant visual events. | [C] if all synchronized media has audio descriptions and they are synchronized with the dialog and relevant visual events. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

22(b) Synchronized Multimedia Alternatives. Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

24(c): Synchronized Captions. All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.

24(d): Audio Descriptions. All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.

###### Applicable Baseline Requirements

B18 Synchronized Media (Captions). Synchronized media must have captions that are time-synchronized with the dialog and relevant sounds.

B19. Synchronized media (Descriptions). Synchronized media must have audio descriptions that are time-synchronized with the video.

### 6. Alternative accessible version

There may be instances where an alternate accessible version of a primary document is provided, because an agency has determined that the primary document cannot be made accessible. Providing an alternative accessible version is only useful when the information is equivalent and up-to-date.

##### 6. How to Test

1) Find alternate versions: Find any Alternate documents by examining the content (pay particular attention to content containing maps, directions, complex charts etc.).

2) Inspect and Determine: Compare the content of the primary document and the Alternate format, noting any information differences and/or out-of date material.

 This is a test of equivalency of the information on an Alternate format. Although the Alternate format must pass all relevant tests for accessibility, that is a separate test to this. This is not a test of whether there should be a separate alternative version.

##### 6. Results

| Failure condition | Does Not Apply? [DNA] | Not Conformant [NC] | Conformant [C] |
| --- | --- | --- | --- |
| A. An Alternate version is provided, but the information is not equivalent to and up to date with the primary document.[22(k); B22] | This test applies only when an alternative version exists. [DNA] if there is no alternative version. | [NC] if an alternate version is provided, but the information is not equivalent to and up to date with the primary document. | [C] if an alternate version is provided, and the information is equivalent to and up to date with the primary document. |

 Enter the test results into the reporting tool.

###### Applicable 508 Standards 1194.XX

22(k) Alternative Versions. A text-only page, with equivalent information or functionality, shall be provided to make a site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.

###### Applicable Baseline Requirements

B22. Alternative Accessible Version. An alternative accessible version must contain equivalent and up-to-date content when the primary document cannot be made accessible.

# Section 508 Standards mapped to the MS Word 2010 test process

The MS Word 2010 Conformance Test Process consists of six main testing sections. Below is a list of each Section 508 standard that is tested in each test section. Testers who are familiar with the Section 508 standards and testing tools can use this as a reference while testing.

###### Note:

The names for Section 508 tests are provided as short-hand for reference in the table that follows and are not the official names. Refer to the standards for the official text.

## Section 508 to Conformance Test (cross-reference table)

| Para. | Name | Conformance Test |
| --- | --- | --- |
| 21 SW (a) | Keyboard Accessibility | 3.3. Images and other objects |
| 21 SW (b) | Built-in Accessibility Features | n/a |
| 21 SW (c) | Visual Focus | n/a |
| 21 SW (d) | Role, Name, State | 1.3. Language of the document (Reserved) |
| 21 SW (e) | Bitmap images | n/a |
| 21 SW (f) | Input text | n/a |
| 21 SW (g) | OS Individual display attributes | n/a |
| 21 SW (h) | Animation | 5.2. Video-only |
| 21 SW (i) | No color dependence to convey information | n/a |
| 21 SW (j) | Variety of color selections | n/a |
| 21 SW (k) | Blinking objects  | 3.4 Flashing |
| 21 SW (l) | Forms | n/a |
| 22 Web (a) | Equivalent text descriptions | 3.3. Images and other objects5.1. Audio-only5.2. Video-only |
| 22 Web (b) | Synchronized Alternatives | 5.3 Synchronized media |
| 22 Web (c) | No color dependence to convey information | 4. Color (and other sensory characteristics) formatting |
| 22 Web (d) | Readable Style Sheets | n/a |
| 22 Web (e) | Redundant text links on server-side image maps | n/a |
| 22 Web (f)  | Client side not server side | n/a |
| 22 Web (g) | Identify row and column headers | 3.2 Tables |
| 22 Web (h) | Associate Data with Headers | 3.2 Tables |
| 22 Web (i) | Descriptive Frame Titles | n/a |
| 22 Web (j) | No flickering Interface components | See 21 SW (k) |
| 22 Web (k) | Text only or Alternative versions | 6. Alternative accessible version |
| 22 Web (l) | Functional Text for Scripts | n/a |
| 22 Web (m) | Plug-ins | n/a |
| 22 Web (n) | Labels for forms | 1.1. Form elements |
| 22 Web (o) | Method to Skip Repetitive Links | n/a |
| 22 Web (p) | Time out notification | n/a |
| 24 Multimedia (c) | Captions | 5.3 Synchronized media |
| 24 Multimedia (d) | Audio descriptions | 5.2. Video-only5.3 Synchronized media |
| 31 FPC (a) | Use without vision | 1.1. Form elements1.2. Document title1.3. Language of the document (Reserved)2.1. Headings2.2 Lists2.3 Columns2.4 Language of sections2.5. Links and User Controls3.1. Running headers, footers and watermarks3.2 Tables3.3. Images and other objects3.5. Reveal Hidden Content4. Color (and other sensory characteristics) formatting |
| 31 FPC (b) | Use with low vision | 1.1. Form elements1.2. Document title1.3. Language of the document (Reserved)2.1. Headings2.5. Links and User Controls3.2 Tables3.5. Reveal Hidden Content4. Color (and other sensory characteristics) formatting |
| 31 FPC (c) | Use without hearing | 5.1. Audio-only |
| 31 FPC (d) | Use with limited hearing | n/a |
| 31 FPC (e) | Use without speech | n/a |
| 31 FPC (f) | Use with physical limitations | 2.1. Headings |

# Document content change log

 This section will be used when test process updates occur.

# MS Word 2010—Section 508 Conformance Test ProcessQuick Reference

The MS Word 2010 Conformance Test Process consists of six main testing sections. Below is a list of each Section 508 standard that is tested in each section. Testers who are familiar with the Section 508 standards and testing tools can use this as a quick reference while testing

Testing preconditions

.docx format?

No editing restrictions?

1. DOCUMENT FORMATTING

1.1. Form elements

Web(n) Labels for forms.

FPC(a) Use without vision

FPC(b) Use with low vision

1.2. Document Title

FPC(a) Use without vision

FPC(b) Use with low vision

1.3. Language of the document (Reserved)

SW(d) Role, Name, State

FPC(a) Use without vision

FPC(b) Use with low vision

2. TEXT FORMATTING

2.1. Headings

FPC(a) Use without vision

FPC(b) Use with low vision

FPC(f) Use with physical limitations

2.2. Lists

FPC(a) Use without vision

2.3. Columns

FPC(a) Use without vision

2.4. Language of sections

FPC(a) Use without vision

2.5. Links and User Controls

FPC(a) Use without vision

FPC(b) Use with low vision

3. OBJECT FORMATTING

3.1. Running headers, footers and watermarks

FPC(a) Use without vision

3.2. Tables

Web(g) Data table headers

Web(h) Complex data tables

FPC(a) Use without vision

FPC(b) Use with low vision

3.3. Images and other objects

SW(a) Keyboard Accessibility

Web(a) Text Descriptions

FPC(a) Use without vision

3.4. Flashing

SW(k) Blinking objects

3.5. Reveal Hidden Content

FPC(a) Use without vision

FPC(b) Use with low vision

4. COLOR (AND OTHER SENSORY CHARACTERISTICS) FORMATTING

Web(c) Color dependence

FPC(a) Use without vision

FPC(b) Use with low vision

5. MEDIA FORMATTING

5.1. Audio-only

Web(a) Text descriptions

FPC(c) Use without hearing

5.2. Video-only

SW(h) Animation

Web(a) Text descriptions

Multimedia(d) Audio descriptions

5.3. Synchronized media

Web(b) Synchronized alternatives

Multimedia(c) Synchronized captions

Multimedia(d) Audio descriptions

6. ALTERNATIVE ACCESSIBLE VERSION

Web(k) Alternate version

1. The Accessibility Committee serves as the principal interagency forum to improve the Federal government’s implementation of Section 508. See [cio.gov/about/committees/accessibility-committee/](https://cio.gov/about/committees/accessibility-committee/). [↑](#footnote-ref-1)