

Working with AutoCAD 2010 Software and Section 508

Section 508 of the U.S. Rehabilitation Act requires that federal agencies' electronic and information technology is accessible to people with disabilities. The Center for Information Technology Accommodation (CITA) in the U.S. General Services Administration's Office of Government-wide Policy has been charged with the task of educating federal employees and building the infrastructure necessary to support Section 508 implementation.

With this white paper, Autodesk offers background information to explain the accessibility features of AutoCAD® 2010 software in the context of Section 508 standards. This was done with the intent of enabling agencies to be compliant with Section 508 regulations.

The document contains subsets of the Electronic and Information Technology Accessibility Standards as published in 36 CFR Part 1194 and provides an analysis of AutoCAD in the context of these standards.

For the purposes of this paper, "AutoCAD" refers to AutoCAD 2010 and all Autodesk® industry-specific products that are based on the AutoCAD 2010 platform, including AutoCAD LT® 2010 software.

The first table provides a summary view of the Section 508 standards. The subsequent tables provide more detailed views of each subsection.

There are three columns in each table. Column one of the Summary Table describes the subsections of subparts B and C of the standards. The second column describes the supporting features of the product or refers you to the corresponding detailed table, "for example, equivalent facilitation." The third column contains any additional remarks and explanations regarding the product. In the subsequent tables, the first column contains the lettered paragraphs of the subsections. The second column describes the supporting features of the product with regard to that paragraph. The third column contains any additional remarks and explanations regarding the product.

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More information on Section 508 can be found at www.section508.gov.

Summary Table		
Criteria	Supporting Features	Remarks and Explanations
Section 1194.21 Software Applications and Operating Systems		Completed
Section 1194.22 Web-Based Internet Information and Applications		Not Applicable
Section 1194.23 Telecommunications Products		Not Applicable
Section 1194.24 Video and Multimedia Products		Not Applicable
Section 1194.25 Self-Contained, Closed Products		Not Applicable
Section 1194.26 Desktop and Portable Computers		Not Applicable
Section 1194.31 Functional Performance Criteria		Completed
Section 1194.41 Information, Documentation, and Support		Completed

Section 1194.21 Software Applications and Operating Systems

Criteria	Supporting Features	Remarks and Explanations
(a) 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.	Keyboard input is provided for all commands. Also, a command line enables the user to type in commands directly and specify other input.	
(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.	Testing* has indicated that AutoCAD and AutoCAD LT software programs do not disrupt the accessibility features of other products on the user's system.	
(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes.	Focus is programmatically exposed through command line scripting, Microsoft® Visual Basic® for Applications (VBA), and C++ programming interface.	
(d) 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.	AutoCAD and AutoCAD LT software provide information to the user via the Microsoft Active Accessibility application.	
(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.	Bitmap images and actions associated with them are consistent.	

<p>(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.</p>	<p>A text window records the log of what is being done. This log file can be saved.</p>	
<p>(g) Applications shall not override user-selected contrast and color selections and other individual display attributes.</p>	<p>Application does not override contrast and color selections. Testing* shows that the application performs well under high-contrast settings. The user can also change color settings.</p>	
<p>(h) When animation is displayed, the information shall be displayable in at least one nonanimated presentation mode at the option of the user.</p>	<p>Animated displays are included only within the product's help system. The same information is documented with text and images.</p>	
<p>(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.</p>	<p>Color-coding is not used as the only means of conveying information. The user can enter a color index or in certain cases an RGB value. Users can also use predefined named colors as described by PANTONE®, RAL, and DIC® color systems.</p>	
<p>(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.</p>	<p>AutoCAD and AutoCAD LT provide a wide variety of color selections. The user has the ability to customize the application window. Users can also use predefined named colors as described by PANTONE, RAL, and DIC.</p>	
<p>(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.</p>	<p>AutoCAD and AutoCAD LT do not use flashing or blinking text.</p>	
<p>(l) When electronic forms are used, 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.</p>	<p>Microsoft Active Accessibility applications such as Narrator can be used to access particulars of the components of a form or dialog box.</p>	

Section 1194.31 Functional Performance Criteria

Criteria	Supporting Features	Remarks and Explanations
(a) 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.	Not Applicable	
(b) 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.	No audio is available in the product. Keyboard navigation is provided for all menu commands. Also, a command line enables the user to type in commands and other input. This text input can be enlarged through product options. Microsoft Active Accessibility applications such as Narrator can be used to access particulars of the components of a form or dialog box.	
(c) 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.	AutoCAD does not require user hearing to operate the software.	
(d) Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.	AutoCAD does not require user hearing to operate the software.	
(e) At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for Assistive Technology used by people with disabilities shall be provided.	AutoCAD does not require user speech to operate the software.	
(f) 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.	Keyboard navigation is provided for all AutoCAD commands.	

Section 1194.41 Information, Documentation, and Support

Criteria	Supporting Features	Remarks and Explanations
(a) Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.	Support documentation is available within the product, as hard copy, or in Adobe® PDF format.	
(b) End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.	This document is posted at www.autodesk.com . Search for "Section 508."	
(c) Support services for products shall accommodate the communication needs of end users with disabilities.	Support services options are available via web page, email, fax, or phone. Direct, in-person support is also available through resellers.	

* Testing was performed by or commissioned by Autodesk and conducted over a controlled network in which participants with varying levels of expertise with AutoCAD and AutoCAD LT performed selected tasks designed to simulate day-to-day production drafting. As with all performance tests, results may vary based on machine, operating system, filters, and even source material. While every effort has been made to make the tests as fair and objective as possible, your results may differ.

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