

Chief Architect Viewer X16

Professional 3D Home Design Software



Reference Manual

*A description of the software interface, including
drawing tools and settings.*

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Contents

Copyrights	2
Program Overview	4
Dashboard	5
The Chief Architect Viewer Environment	6
Using Input Devices	7
Menus, Toolbars, and Hotkeys	9
Dialogs	10
Edit Handles	11
The Status Bar	12
Message Boxes	13
Viewing a Plan	13
Viewing a Layout File	15
Measuring Objects	15
Getting Help	15
About Chief Architect	17
File Management	18
Compatibility with Other Programs	19
Chief Architect Viewer Data	19
Opening Plan and Layout Files	19
Saving and Exporting Files	20
Auto Archive	22
Undo and Redo	23
Referenced Files	24
Exiting Chief Architect	26
Window and View Tools	27
View Windows	28
Plan Views	29
Working in Multiple Views	29
View Tools	31
Zoom Tools	31
Fill Window	32
Panning the Display	32
Closing Views and Files	33
Displaying Objects	35
Layers	36
Layer Display Options Dialog	36
Layer Sets	37
Display Toggles	37
Select Color Dialog	38
Text	40
Fonts and Alphabets	41
The Text Tools	42
Creating Text	42
Displaying Text Objects	42
Rich Text Specification Dialog	43
Selecting Text Objects	46
Editing Text	47
Copying and Pasting Text Objects	49
Arrow Lines	51

Editing Polylines	52
Line/Polyline Specification Dialog	53
Deleting Objects	55
Multiple Floors	56
Displaying Floor Levels	57
The Current Floor	57
The Reference Display	58
3D Views	60
Camera Defaults Dialogs	61
3D View Tools	61
Creating Camera Views	62
Creating Overviews	63
Cross Section/Elevation Views	64
Displaying 3D Views	65
Navigating in Camera Views	67
Gamepad Settings Dialog	71
Editing 3D Views	73
Cross Section Slider	75
Virtual Reality	75
Saving and Printing 3D Views	80
Camera Specification Dialogs	81
Cross Section/Elevation Specification Dialogs	84
3D Rendering	86
Rendering Effects	87
Lighting Modes	87
Adjust Sunlight Dialog	88
Rendering Techniques	89
Rendering Technique Options	90
Pictures and Metafiles	93
Exporting Pictures	94
Metafiles	94
Printing	96
The Printing Tools	97
Print Preview	97
Printing Across Multiple Pages	97
Printing to a PDF File	98
Print View Dialog	98
Print Image Dialog	101
Index	103

Program Overview

Chapter 1

Chief Architect Viewer can be used to view and add commentary to Chief Architect drawings in either plan or layout file format, facilitating the communication process between design professionals and their clients. Chief Architect Viewer offers many useful features:

- Open and explore plan and layout files created by Chief Architect software.
- Modify the display of the plan to see more or less detail.
- Create 3D views of the full model.
- Add notes to the drawing for review by your design professional.
- Print from any view.
- Export views as either picture files or Windows metafiles for use in other programs.

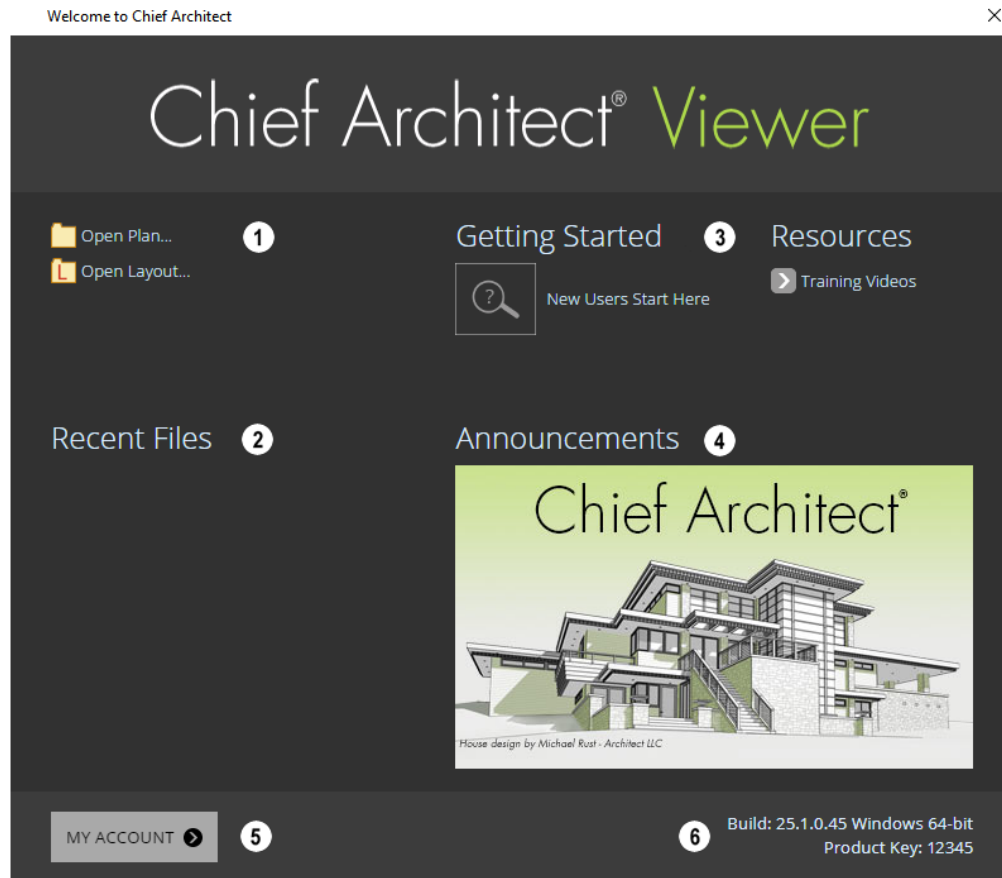
If you would like to learn more about Chief Architect, select **Help> Visit Chief Architect Web Site**  from the program menu.

TOPICS

Dashboard	5
The Chief Architect Viewer Environment	6
Using Input Devices	7
Menus, Toolbars, and Hotkeys	9
Dialogs	10
Edit Handles	11
The Status Bar	12
Message Boxes	13
Viewing a Plan	13
Viewing a Layout File	15
Measuring Objects	15
Getting Help	15
About Chief Architect	17

Dashboard

 When Chief Architect is launched, the Dashboard window displays, allowing you to choose how you want to begin working in the program or access useful resources. The Dashboard can also be opened at any time by selecting **File>Dashboard**.



1 New/Open File

Choose **Open Plan**  or **Open Layout**  to view a plan or layout file. See *Opening Plan and Layout Files on page 19*.

2 Recent Files

The full pathnames of the most recently opened files are listed here. Click on a name to open the file.



Move your mouse pointer over a name to see the file's full pathname.

3 Getting Started & Resources

A selection of useful online **Getting Started** options and **Resources** are available here. Click on an option to launch your default internet browser to chiefarchitect.com.

- Click **Getting Started** to visit the Getting Started page on our website with links to a variety of resources to help you begin using the program.
- Click **Training Videos** to access a searchable collection of videos focused on specific topics.

4 Announcements

When an internet connection is available, the **Announcements** section displays updated messages and news from Chief Architect.

5 My Account

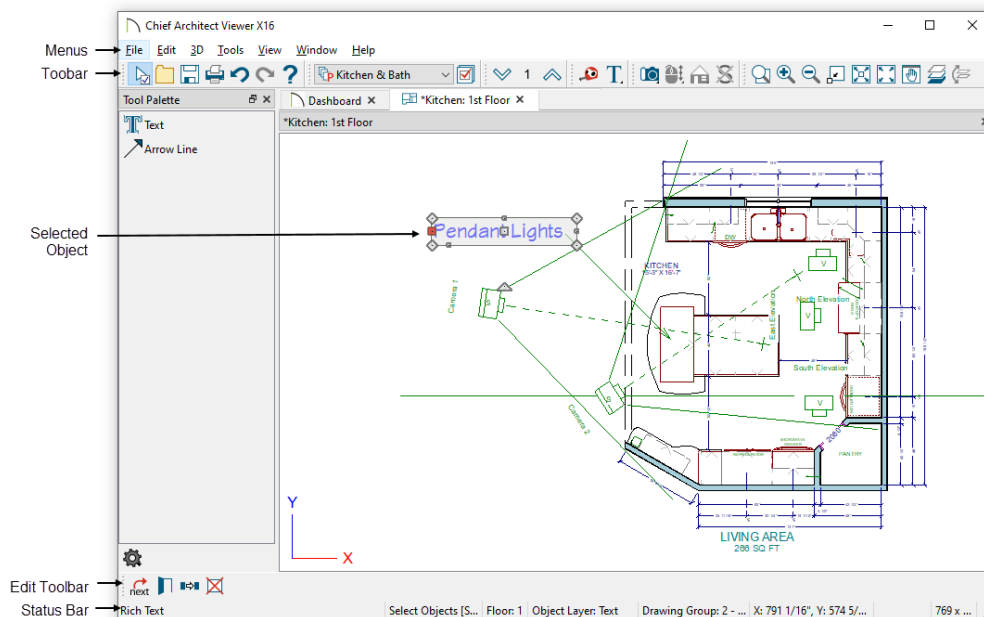
Click **My Account** to launch your default internet browser to the My Account page on our website. If you are not currently logged in, you will instead go to the Login page.

6 Build

Your software version's **Build** number displays here for reference.

The Chief Architect Viewer Environment

Chief Architect is designed to be intuitive and efficient.



3D DRAFTING

In Chief Architect, the drawing area is laid out on a Cartesian grid: a three dimensional coordinate system described using the X, Y, and Z axes. A Coordinate System Indicator displays at the bottom left corner of most views, and the current position of your mouse pointer displays in the Status Bar at the bottom of the program window. See [Coordinate System Indicators on page 28](#).

Architectural objects take up space in all three dimensions and their height, width and depth can be specified in U.S. or metric units. In addition, the location of objects can be precisely defined using coordinates, again specified in U.S. or metric units.

EASY ACCESS TO TOOLS

You can access Chief Architect's features in various ways using the mouse and keyboard.

- The program's tools are accessed using the menus and toolbar buttons.
- Keyboard shortcuts are available for most tools.
- Contextual menus display with a right-click of the mouse.
- [The Status Bar on page 12](#) at the bottom of the screen provides tool descriptions and other information about the current task.

Chief Architect's parametric, object-based design technology means you place and edit objects, rather than work with the many individual lines or surfaces used to represent them.

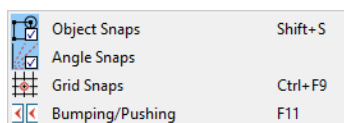
You can quickly select and edit the location, size, shape, style and other properties of objects as well as change the materials applied to their surfaces.

Use Chief Architect's editing capabilities to make the objects you place in a plan match the objects they represent in real life. For example, you can set up your windows and doors to match those available from your supplier.

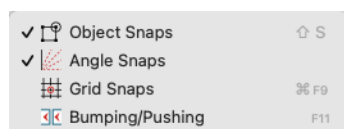
INTERFACE TOGGLES

A number of useful drawing and editing behaviors, as well as the display of important elements in the interface, can be easily enabled and disabled using the menus.

When a setting is turned on, or a tool is selected, its icon will be shaded and a small check is displayed at its lower right corner. In Windows, but in MacOS™ only a large check will be displayed to the left of the icon.



Menu in Windows



Menu in MacOS™

Using Input Devices

You can interact with Chief Architect using a variety of input devices.

KEYBOARD

A keyboard is necessary for entering text and size values. See [Dialogs on page 10](#).

Your keyboard can also be used to navigate the dialog panels, as well as navigate the program menus. Many commands can also be invoked using keyboard hotkeys. See [Menus, Toolbars, and Hotkeys on page 9](#).

In addition to the keyboard, a mouse or other device that can move a pointer is necessary in order to draw, select, and edit objects in your drawings.

THREE BUTTON MICE

Left Button



The **left button** is the primary button used in Chief Architect. Unless specified otherwise, Chief Architect documentation refers to the left mouse button.

Objects and most views are created by either clicking the left mouse button or by dragging the cursor in the direction of a desired view. The **Status Bar** at the bottom of the Chief Architect Viewer's main window indicates which tool is active.

Note: If you are left-handed and have re-programmed your mouse, reverse the instructions for left and right buttons in this manual.

Right Button



The **right button** has several uses:

- Right-click to select any object. If, for example, the **Full Camera**  tool is active, the left mouse button only allows you to click and drag to create 3D views or to select camera symbols. You can, however, select other types of objects such as text with the right mouse button.
- You can also use the right mouse button to open a context sensitive menu with additional editing commands. See [Contextual Menus on page 10](#).

Middle Button



The **middle button** can be used to pan in most view types. To close a tabbed view window, click on its tab using the middle mouse button. You can also program it to work as a double-click.

If your mouse does not have a middle mouse button, in the Mac version of Chief Architect you can use the left button and the Command key to achieve the same results.

Mouse Wheel



The **mouse wheel** can be used to zoom in and out in most view types. See [Zoom Tools on page 31](#).

3D MICE

3Dconnexion®'s 3D mice can be used to navigate in Chief Architect. For information about navigating in camera views and overviews, see [3Dconnexion® 3D Mice on page 67](#).

TRACKPADS

In addition to the standard trackpad gestures on your system, in Chief Architect you can pinch to zoom.

In macOS™, you can Option + click to pan. Panning with a trackpad is not supported in the Windows version of the software, however.

TOUCH SCREENS

Standard one-finger touch screen gestures are supported in both the Windows and Mac versions of the software with one exception: double-tapping is not supported. In the Windows version, touching with a second finger to cancel an action is also supported, as are two-finger pan and two-finger pinch to zoom.

GAMEPADS

In the Windows version of Chief Architect, gamepads can be used to navigate in camera views, overviews, as well as elevation views. See [Gamepads on page 68](#).

CROSSHAIRS

✚ Crosshairs help you position the pointer relative to objects in a view while drawing and editing. They can be set to display in Plan and Elevation views. Select **View> Crosshairs** to toggle crosshairs on or off.

Menus, Toolbars, and Hotkeys

Chief Architect's drawing, editing, and view tools can be accessed via menus, toolbar buttons, and keyboard hotkeys.

PROGRAM MENUS

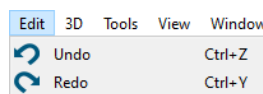
Chief Architect's program menus are located below the title bar in the program window and can be used to access nearly all tools in the program. Click on a menu name to expand it, then click on a menu item to either activate that tool or access the item's submenu. Items with a submenu have an arrow to the right of the name.

In the Chief Architect documentation, menu paths are written in this format: **Tools> Floor/Reference Display> Up One Floor** .

The menus can be accessed using the keyboard:

- Press the **Alt** key once to enable this functionality - one letter in each menu will become underlined.
- Press the key associated with one of these underlined letters to expand its menu - one letter in each menu item's name will be underlined. Press the key associated with one of these letters to activate that tool or access the item's submenu.
- Press the **Esc** key to undo your last selection, or click with the mouse to exit out of this functionality.

Menu items with an icon to their left have a toolbar button associated with them. In addition, many tools can also be activated using keyboard hotkeys. If a menu item has a hotkey, it will display to the right of the item's name.



Edit menu items with button icons to the left
and hotkeys to the right

TOOLBARS AND HOTKEYS

Chief Architect Viewer installs with a set of toolbars docked to the margins of the program window. Using these toolbar buttons is a fast and easy way to access many program features. If a tool is active, a small check mark will display at the lower right of its button icon.

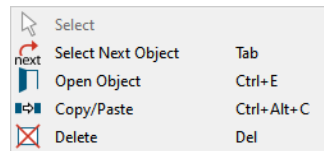
The Edit Toolbar is a special toolbar with buttons that can be used to modify a selected object or objects. The buttons on this toolbar vary, depending on the type(s) of object selected, the current view, and how you selected the object; when no object is selected, the Edit Toolbar is blank. See [Using the Edit Tools on page 48](#).

CONTEXTUAL MENUS

Contextual menus are context-sensitive menus that display tools relevant to a selected object or view. To open a contextual menu, right-click on a text object, in an empty space in a view window, or in a text field in a dialog box.

Contextual Menu for Plan Views

The options in an object's contextual menu are usually the same as those on an object's Edit Toolbar.



Contextual Menu for a selected text object or arrow line

Dialogs

Various functions in Chief Architect Viewer are accessed through dialog boxes.

SPECIFICATION DIALOGS

Each object that you can draw in Chief Architect Viewer has a unique specification dialog where you can enter size, style and other information specific to the selected object. To access it, select the object and click the **Open Object** edit button. See [Text on page 40](#).

You can also double-click on an object with the **Select Objects**  tool active to open its specification dialog. See [Selecting Text Objects on page 46](#).

In addition, you can access an active camera view's specification dialog by selecting **3D> Edit Active Camera** . The 3D View tools also have defaults dialogs where you can specify the initial attributes of camera views. See [3D Views on page 60](#).

NAVIGATING DIALOGS

Dialog panels and settings can be accessed using the mouse. You can also navigate the settings on a given dialog panel using the keyboard. For example:

- Line items in tree lists can be browsed using the arrow keys. **Up** and **Down** navigate the list, while **Left** and **Right** expand and contract categories.
- Press the **Tab** key to shift focus from the tree list to the first setting on the selected panel.
- Press the **Tab** key to shift focus from one setting to the next, or **Shift + Tab** to go in the reverse direction.
- A check box can be checked or cleared by pressing the **Spacebar** or the **+** or **-** keys, respectively, while it is in focus.
- Columns of radio buttons can be navigated using the **Up** and **Down** arrow keys; rows can be navigated using the **Left** and **Right** arrows. Select a radio button by pressing the **Spacebar** while it is in focus.
- Settings in list boxes can be navigated using the **Up** and **Down** arrow keys. When a check box is in focus, it can be checked or cleared by pressing the **Spacebar**.

- Drop-down lists can be browsed using the **Up** and **Down** arrow keys. When the mouse pointer is directly over the drop-down, the mouse scroll wheel can also be used; on a Mac, the list must also be expanded. In Windows only, you can press **Tab** to select the highlighted item in the list and proceed to the next setting.
- Settings with spin control arrows  can be adjusted by typing in the text field or using the **Up** and **Down** arrow keys. When the mouse pointer is directly over the setting, the mouse scroll wheel can also be used.
- Slider bars  can be adjusted by typing in the text field or using the **Left** and **Right** arrow keys. When the mouse pointer is directly over the slider bar, the mouse scroll wheel can also be used.
- Line items in tables can be navigated using the **Up**, **Down**, **Left**, and **Right** arrow keys.
- To expand a drop-down list in a table, navigate to it and press the **Spacebar**. Then, browse the list using the **Up** and **Down** arrow keys. Using the mouse, a drop-down list in a table must be clicked twice: first to select, then to expand the list.
- Line items in tables can be group selected using the **Ctrl** or **Shift** keys, or by pressing **Ctrl/⌘ + A**.
- Press the **Enter** key to close most dialogs and apply your changes.
- In the Mac version, **Command + .** closes dialogs.

Note: Keyboard navigation in dialogs may vary somewhat depending on your computer platform.

In the Mac version of the software, Dictation is supported in dialogs. Select **Edit> Start Dictation**, then open a dialog. Say the word “Numeral” before a number to enter it as a numeric value or immediately follow a number with a unit such as “foot” to enter it as a measurement.

Edit Handles

A selected object has edit handles that can be used to modify its size, position, and orientation. When you move the pointer over an edit handle, information about what it does displays in the Status Bar and the pointer changes to suggest how you can use it.

The edit handles that display depend on the type of object selected, the current view, and how far you are zoomed out. Edit handles do not resize as you zoom in or out. If you are zoomed out far enough, some edit handles may be hidden so that they do not stack over one another. As you zoom in, these handles become visible again.

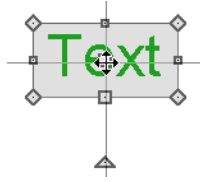
 You can cancel any edit handle operation before it is completed by pressing the **Esc** key or by pressing any two mouse buttons at the same time.

MOVE EDIT HANDLE



The square Move handle located at the center of a selected Text object or multi-segmented Arrow Line lets you move that object to a new location. When you position the mouse pointer over the Move handle, it displays a four-headed arrow. See [Editing Text on page 47](#).

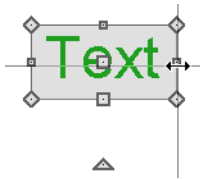
Depending on the type of object(s) selected and how far you are zoomed in or out, the position of the Move handle may shift so that it remains on-screen. See [Zoom Tools on page 31](#).



RESHAPE/RESIZE EDIT HANDLES

↔ Square edit handles on the edges and corners of a selected object allow you to resize the object by moving its edges. A two-headed arrow indicates that the object's edge or corner can be moved in the direction of the arrows. When multiple objects are selected, the Resize handle is not available.

Depending on the type of object selected and how far you are zoomed in or out, the Resize handles may not display on-screen.

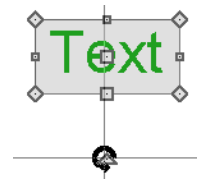


In the case of a selected Arrow Line, clicking and dragging the Resize edit handle will move the object perpendicular to itself.

ROTATE EDIT HANDLE

🔄 The triangular Rotate handle lets you rotate the selected object or group of objects. The Rotate handle is located adjacent to either the object's selected edge or its front if it has one, and when you move your mouse pointer over this handle, it displays a circular arrow.

A selection's Rotate handle will display regardless of how far you are zoomed out; however, it is possible to zoom in far enough that it no longer can be seen.



The Status Bar

The Status Bar at the bottom of the main program window displays information about the current state of the program.

This information depends on a variety of conditions such as the type of object selected, and the current position of the pointer. Examples of information that may be reported include:

- The type of object currently selected or the total number of group-selected objects.
- A description of the edit handle that the pointer is over.
- A brief description of the toolbar button or menu item that the mouse pointer is positioned over.
- The name of the active tool, a brief description of that tool, and its hotkey, if it has one.
- The length and/or angle of an object as it is being drawn.

- Basic information about a selected library object, folder, or catalog.
- The current floor level.
- The layer that the selected object is on and its Drawing Group.
- The size of the active window in pixels.
- Whether a camera view is rendering or has finished rendering.
- The current CAD coordinates of the mouse pointer.

Message Boxes

As you work in Chief Architect, the program will occasionally prompt you to examine your settings, alert you if you command it to do something that could potentially cause a problem, or notify you if it encounters a problem that needs your attention.

Situations where such message boxes may display include:

- Closing a file or view without saving;
- Modifying an object that is set to rebuild automatically;
- A file referenced outside the program, such as an image or texture, is missing

As with dialog boxes, you can access the options in a message box using the mouse or navigate them using the keyboard.

A few messages have a **Send Report** button. Click this button to send details regarding the issue that prompted the message to Chief Architect via the internet.

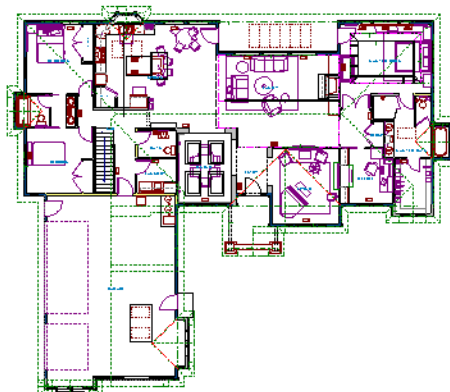
Some message boxes include a “Remember my choice” or a “Do not show this again” check box. Check this box to prevent messages of this specific type from displaying in the future. When this box is checked, some options in the message box may become inactive.

To allow all message boxes to display again, select **Help> Reset Message Boxes**.

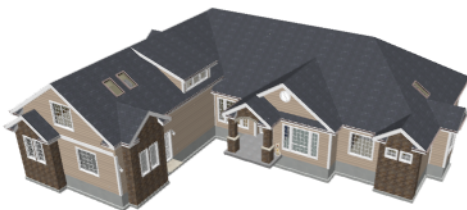
Viewing a Plan

You can see a model in a variety of different 2D and 3D views. You can display more than one view at a time; and in any view, you can pan or zoom in or out. See [Window and View Tools on page 27](#).

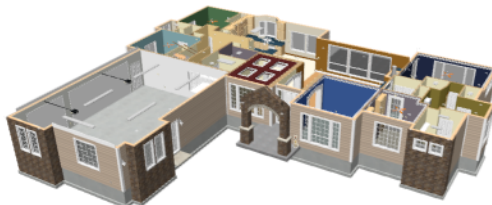
Plan view is a 2D view of the model. Each floor displays separately; however, you can control which objects display at any given time, can easily switch between floors, and can also display items on a second floor for reference. See [Multiple Floors on page 56](#).



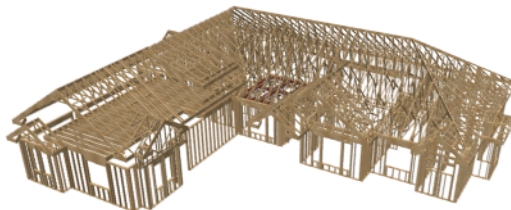
You can create interior and exterior 3D views of a model from any perspective. As in plan view, you can control which objects are visible. See [3D Views on page 60](#).



You can also create **Floor Overviews** that show only the current floor plus any floors beneath it. Ceilings on the current floor are omitted so you can see the interior, visualize the relationships between spaces, and plan traffic flow.

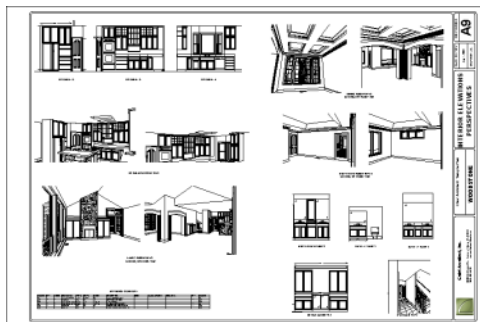


Framing Overviews display framing in 3D, provided that framing has been built. You can customize 3D views to serve special purposes such as this.



LAYOUT FILES

Layout files are separate from plan files and contain views of a design arranged on pages for construction documentation. See [Opening Plan and Layout Files on page 19](#).



All views can be exported as a graphic image. See [To export a picture on page 94](#).

Viewing a Layout File

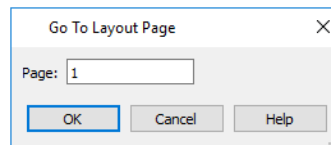
Layout files allow you to preview construction documents before they are printed. Each layout file typically contains many pages, each with one or more plan view, cross section/elevation view, perspective view, or detail.

THE CURRENT PAGE

 The current layout page is indicated at the center of the Layout Page Up/Down buttons.

To navigate between layout pages

1. Click the arrow buttons on either side of the **Layout Page** button.
2. Click the **Current Page number** between the arrows to open the Go To Layout Page dialog. Enter a page number and click **OK**.



3. Select **Page Up** or **Page Down** from the **Tools> Layout Page>** menu.
4. Press **Shift + N** (Page Up) or **Shift + M** (Page Down).

You can add Text and Arrow Lines to layout pages just as you can to plan views. See [Creating Text on page 42](#).

Measuring Objects

Plan files often have dimension lines drawn in them to show the lengths of walls and other features. If you would like to measure a distance that is not reported by a dimension line, you can use the Tape Measure tool.

TAPE MEASURE

 Use the **Tape Measure** tool to draw a temporary dimension line between any two points in the drawing area. The tool will place temporary markers at the start and end points of the dimension line. The Tape Measure line and its start and end points all disappear when you release the mouse button.

Although you can use the Tape Measure tool in layout files, bear in mind that the views on layout pages are scaled while the Tape Measure tool's measurements are not. For best results, therefore, use this tool in plan views or cross section/elevation views rather than in layout. See [View Windows on page 28](#).

Getting Help

 There are many forms of help available in Chief Architect Viewer including: Tool Tips, the Status Bar, and the online Help menu.

All these forms of help assume you have a basic working knowledge of your operating system, including how to use a mouse, open, close and save files, copy, paste, and right-click to access contextual menus. Help also assumes you are familiar with basic computer terminology.

The vocabulary used in the design and construction trades vary widely by region. Our online Glossary provides definitions for the terms we use in our information resources. Visit chiefarchitect.com.

More information is available on Chief Architect's website, chiefarchitect.com.

TOOL TIPS

When you move the pointer over a toolbar button or menu item, a **Tool Tip** displays, offering a brief description of the tool. More information displays in the Status Bar at the bottom of the window. The Status Bar also reports information about the currently active tool or the currently selected object. See *The Status Bar on page 12*.

CONTEXTUAL HELP

 Chief Architect Viewer's **Help** is a searchable menu that provides information about all of the tools in the program. Select **Help> Launch Help** or press the **FI** key to open the program's Help and explore the table of Contents, browse the Index, or Search for keywords.

The Help can be used to provide instant information about toolbar buttons, menu items, and objects in your plan.

- Position the mouse pointer over a toolbar button or menu item, then press the **FI** key to open the Help to a page with more information about the tool.
- When an object is selected, press the **FI** key to open the Help to a page with information about that object. If you position the mouse pointer over one of the selected object's edit handles and press the **FI** key, a page with information about that handle will display instead.
- Press the **Help** button in any dialog box to open online Help to a page describing the options in that dialog.

When the Help is open, it will update automatically to show information about the currently selected object, active tool or dialog, or highlighted item. If you would like to turn off this dynamic behavior, click the **Prevent Help from Updating Dynamically**  button at the top of the Help window.

Additional buttons at the top of the Help window allow you to zoom as well as search the current page.

WARNING AND INFORMATION MESSAGES

As you work, the program may occasionally present Warning or Information messages regarding the operations you are performing. These messages are intended to help you use the program as designed and avoid potential problems. See *Message Boxes on page 13*.

TECHNICAL SUPPORT

If you encounter a problem while trying to use Chief Architect Viewer X16, select **Help> Technical Support** to launch your default web browser to our Technical Support home page at www.chiefarchitect.com.

Chief Architect strives to make our documentation as helpful as possible.
Please send any suggestions to: documentation@chiefarchitect.com.

About Chief Architect

Select **Help> About Chief Architect** in Windows[®] or **Chief Architect> About Chief Architect** in macOS[™] to view the program's version number and its release date.

Contact information for Chief Architect, Inc. is available on the MORE INFORMATION panel.

File Management

Chapter 2

Chief Architect Viewer reads and edits two main document types: **.plan** files and **.layout** files. The complete 3D model of a structure, surrounding terrain and any CAD data associated with it are stored in the plan file. Data used to create working drawings and the links to various views or details are stored in the layout file.

All commands related to opening, saving and closing plans are located in the File menu. You can also open plans from the Dashboard window. See *Dashboard on page 5*.

TOPICS

Compatibility with Other Programs	19
Chief Architect Viewer Data	19
Opening Plan and Layout Files	19
Saving and Exporting Files	20
Auto Archive	22
Undo and Redo	23
Referenced Files	24
Exiting Chief Architect	26

Compatibility with Other Programs

Plans and layout files produced in the following programs can all be read by Chief Architect Viewer X16.

- Chief Architect® 10.0 through X15
- All Better Homes and Gardens Home Designer® products, Interior Designer, and Landscaping and Deck Designer, Versions 7 and 8.
- All Chief Architect Home Designer® products, Interior Designer, and Landscaping and Deck Designer, Versions 9 through 2024.

Files that have been opened and saved in the Chief Architect Viewer X16 can be read again in Version X16 Chief Architect programs and Version 2024 Home Designer programs, allowing you to share your thoughts and ideas with your design professional.

Files that have been opened and saved in Chief Architect Viewer X16 cannot be read by any of the program versions listed above.

Plans and layout files produced in the Windows® version of Chief Architect Viewer X16 can be read in the Mac® version, and vice versa.

Chief Architect Viewer Data

When Chief Architect Viewer X16 is installed, the program automatically creates a folder in the user Documents directory called **Chief Architect Viewer X16 Data**. This folder contains important information and should not be moved, renamed or deleted.

Because the Chief Architect Viewer X16 Data contains custom user data, it is not deleted when the program is uninstalled.

Opening Plan and Layout Files



Chief Architect allows you to open, view and add comments to plan and layout files created for you by your design professional. Before opening one of these files, you must copy it onto your computer's hard drive.

A good location for these files is your Documents directory, which is specifically intended for your own files.

Plan and layout files often refer to external support files such as images that your design professional may have also given to you. It is best to keep all files associated with your drawings in the same folder.

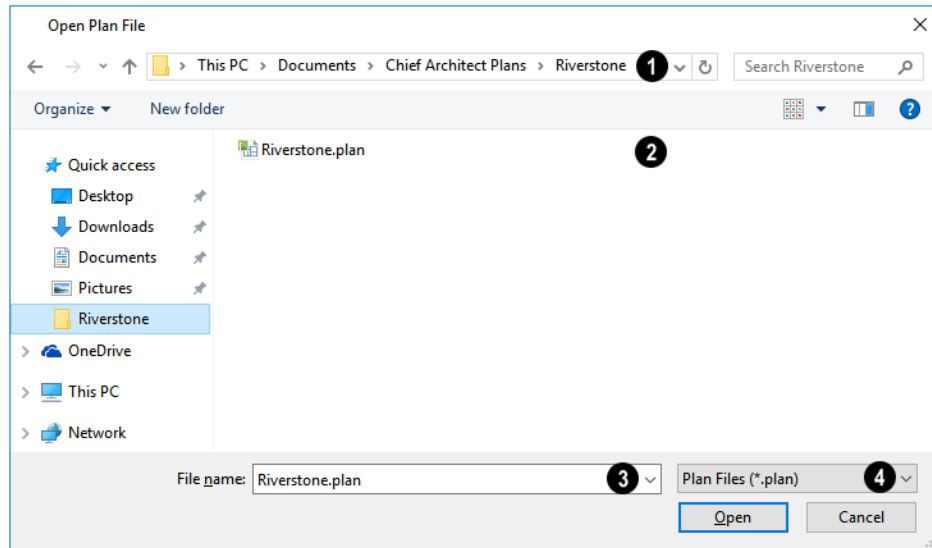
For example, you can create a folder called "Chief Architect Plans" or another name you prefer and then copy all the files given to you there. See your operating system's Help to learn how to create folders.



Before opening a file located on a removable storage device, server, or other computer on a network, copy it to your local machine's hard drive first.

OPEN FILE DIALOG

The Open File dialog uses the operating system's file open dialog format. The dialog name may vary, depending on your operating system and the type of file being opened.



1 File Path

Browse to the location on your computer where the file you wish to open is saved.

2 Folder Contents

Any existing folders and/or files in the current location display here.

3 File Name

When selecting a file, its name will automatically display in the **File Name** field. You can also type the file's name to locate a specific file.

4 File Type

When opening a file, the program will usually choose the appropriate file type from the **File type** drop-down list.

Plan files open to the floor that was active when the file was last saved and closed; layout files open to the page that was active.

Saving and Exporting Files



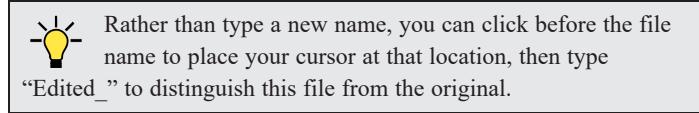
There are two options for saving plan and layout files: **Save** and **Save As**.

When you first open a file in Chief Architect Viewer, it is recommended that you use **Save As** to modify the name of the file so that it can be distinguished from the original file that you received from your design professional.

To save a plan or layout file

1. Select **File> Save As**  to open the Save File dialog.
2. Specify a location on your local computer where you would like to save the file.
3. It is strongly recommended that you never save directly:

- Across a network, such as onto a server;
 - Onto removable media such as a USB thumb drive.
 - Across the internet.
4. In the **File name** text field, type a name for the file.



5. Chief Architect automatically assigns the **File of type** and file extension **.plan** to plan files and **.layout** to layout files.
6. When both the Save in location and File name are correct, click **Save**.

SAVING PLAN AND LAYOUT FILES

Both **Save** and **Save As** can be used to save your plan and layout files; however, they accomplish this in two different ways:



Save saves the current state of your plan or layout file without changing its name and should normally be used for saving your work.



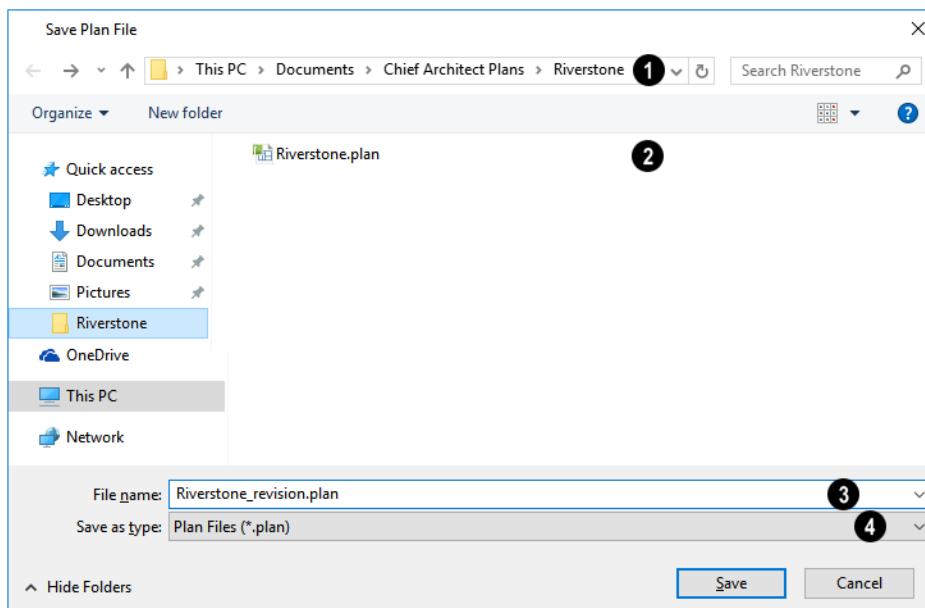
Save As opens the Save File dialog, allowing you to save the plan or layout file using a different name or location on your computer.

Initially, all **Open**  and **Save As**  operations go to your Documents directory. After that, the location last visited is remembered and subsequent **Open** or **Save As** commands default to the directory last used for that operation. This path is saved when the program exits. The next time Chief Architect is launched, these defaults are used.

SAVE FILE DIALOG

The Save File dialog uses the operating system's file save dialog format, and is also used when exporting files. The dialog name may vary, depending on the type of file being saved or exported.

A similar Select Folder dialog allows you to select a folder to which files can be exported.



1 Location

Choose a location on your local computer for the file you are saving.

2 Files

Any existing folders and/or files in the current location display here.

3 File Name

In the **File Name** field, type a name for the file. If you select an existing file from the space above, its name will display here automatically.

4 Save as Type

When saving a file, the program will choose the appropriate file type from the **Save as type** drop-down list. When exporting, you may need to choose a specific file type.

EXPORTING FILES

Chief Architect Viewer has options for exporting information out of your drawings. See [Pictures and Metafiles on page 93](#).

File export dialogs are simply versions of the Save File dialog. See [Save File Dialog on page 21](#), above.

Auto Archive

The first time a plan or layout is saved, an Archive folder is automatically created in the Chief Architect Viewer X16 Data folder. The Archive folder contains Auto Save and Archive files.

 Auto Save and Archive files should not be viewed as a substitute for regularly saving your work by selecting **File> Save** or pressing **Ctrl/⌘ + S**, nor should they be considered an alternative to your own file backup routine.

ARCHIVE FILES

Every time a drawing is saved, Archive files that keep a historical archive of your plan are automatically created or updated.

 JonesResidence.plan

 JonesResidence_2024_1_15.plan

 JonesResidence_2024_1_15_13.plan

 If you do not save your work regularly, your archive files will not be updated.

Archive files are meant to be for emergency use only. If you must access an archive file, open it as you would any other file. As soon as the file is open, use **Save As**  to save this file to another location.

MANAGE ARCHIVES

Chief Architect offers two convenient ways to access Archive folders.

- Select **File> Manage Auto Archives**  to open the current plan's Archive folder.
- Click **Yes** in the Archived Files dialog when the program warns you that the number of archive files exceeds the **Auto Archive Files** value.

You can also move or delete archived files using your operating system. See your operating system's Help for more information.

AUTO SAVE FILES

As you work, Chief Architect automatically creates Auto Save files at intervals when changes are made to a file but not saved by selecting **File> Save** .

These Auto Save files are appended **_auto_save.plan** or **_auto_save.layout** and are saved in the Archive folder.

When you close a file normally, its Auto Save file is retained until the next time the file is opened - at which time the Auto Save file is overwritten.



JonesResidence_auto_save.plan

Auto Save file after normal shutdown

Auto save files created as a result of an improper program shutdown are appended **_auto_save_bak.plan** or **_auto_save_bak.layout**.



JonesResidence_auto_save_bak.plan

Auto Save file after abnormal shutdown

If your computer shuts down accidentally, you can recover some of your work by opening the **_auto_save_bak** file.

When you reopen a file after a computer shut down or system crash, the program will notify you if an Auto Save file newer than the original file is found and give you the option to open that file.

Even with Auto Save, you should save your work manually on a regular basis using any of the following methods:

- Click the **Save**  button.
- Select **File> Save** .
- Press **Ctrl/⌘ + S**.

Undo and Redo



The **Undo** and **Redo** commands allow you to both undo the last action performed, as well as redo actions that were recently Undone.

The 50 most recent actions can be Undone or Redone. Actions that can be Undone and Redone include creating, editing, and deleting objects.

To Undo an action, select **Edit> Undo**, click the **Undo**  button, or press **Ctrl/⌘ + Z**.

The Redo command is only available after Undo has been used. To Redo an Undone action, select **Edit> Redo**, click the **Redo**  button or press **Ctrl/⌘ + Y**.

It is important to note that **Undo** and **Redo** do not affect all actions in the program, including:

- Save and Save As. See [Saving Plan and Layout Files on page 21](#).
- Changes made in a dialog while the dialog box is open. See [Dialogs on page 10](#).
- Changes made to the display by panning the display or zooming in or out. See [Zoom Tools on page 31](#).
- Changes made to the position of a camera, or its Rendering Technique. See [Editing 3D Views on page 73](#).

Referenced Files

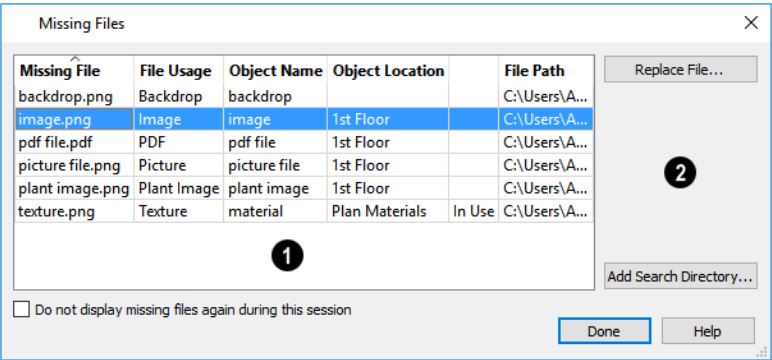
A Chief Architect plan or layout file typically includes information from a variety of external files.

MISSING FILES DIALOG

Chief Architect plan and layout files can reference a variety of external file types for added detail, including:

- Material Textures
- Images
- Plant Images
- 3D Backdrops
- Picture Files
- PDF Files

Whenever any view in a plan or any page in a layout is opened, the program checks for referenced files used in that view and will notify you if any of those files cannot be found by opening the Missing Files dialog.



1 File Information

The table lists any Missing Files as well as useful information about each:

- **Missing File** reports the name and file extension of the missing file.
- **File Usage** indicates how the missing file is used in the program.
- **Object Name** states the name of the object in Chief Architect that references the file.
- **Object Location** indicates where in the file the object can be found.

- The next column indicates whether a missing texture is **In Use** in the plan.
- **File Path** states the last known location of the missing file on your computer system.

Click on a line item in the table to select it and resolve it using the options on the right.

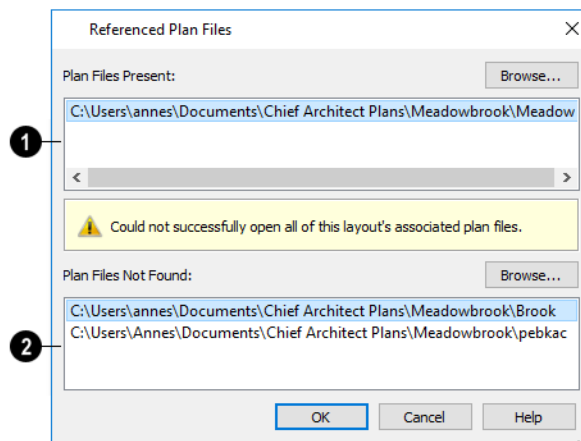
2 Options

The buttons on the right offer options for resolving a selected missing file.

- Click the **Replace File** button to open the Browse for Missing File dialog and select a file saved on your system to replace the missing one. See [Opening Plan and Layout Files on page 19](#).
- Click the **Add Search Directory** button to direct the program to a particular folder to search for missing files in.

You can prevent this dialog from opening automatically by checking **Do not display missing files again during this session** at the bottom of the dialog.

REFERENCED PLAN FILES DIALOG



1 Plan Files Present

The names of all plan files with intact links to the current plan or layout are listed here.

If you want, you can select a file and click the **Browse** button just above the **Plan Files Present** field and replace the selected plan with a different plan saved on your system.

2 Plan Files Not Found

The names of all plan files with disrupted links to the current plan or layout are listed here. Any files listed here have been moved, renamed, or deleted and cannot be found by the program. Intervention is required to find these files and reestablish their links to the current file.

Select a missing file and click the **Browse** button just above the **Plan Files Not Found** field to open the Browse For Missing File dialog, which is a typical Open dialog. See [Opening Plan and Layout Files on page 19](#).

- Locate the missing file in your system's directory structure. When the missing file is selected, click **Open** to link it to the layout.
- You can also redirect an intact link to from a File Present in Layout to a different file in the same manner.

If all missing files are successfully relinked, the layout opens when you click **OK** in the Referenced Plan Files dialog.

Be sure to choose **File>Save**  in the layout file when the missing files have been located to save their links to the layout file.

Exiting Chief Architect

Select **File> Exit** in Windows[®] or **Chief Architect>Quit** in macOS[™] to exit the program. It is best to save your work before exiting/quitting; however, if you have not saved any open files, you will be reminded to do so. See [Closing Views and Files on page 33](#).

When you exit from the program using **File> Exit** or **Chief Architect>Quit**, all Autosave files and Undo files are automatically deleted. See [Auto Save Files on page 23](#) and [Undo and Redo on page 23](#).

In macOS[™], if you click the program window's red **Close** button, the program window will close and you will be prompted to save your work; however, the program itself will continue to run. If you do not plan to use the program in the near future, it is good practice to **Quit** instead of letting the program run in the background.

Window and View Tools

Chapter 3

The View and Window Tools let you control how views of your drawing are shown on screen, as well as toggle useful drawing aides on and off.

By default, Viewer uses a tabbed document interface. The name of the file and the type of view displays at the top of each view window in its title bar. If the view is saved, its name also displays.

TOPICS

View Windows	28
Plan Views	29
Working in Multiple Views	29
View Tools	31
Zoom Tools	31
Fill Window	32
Panning the Display	32
Closing Views and Files	33

View Windows

In Chief Architect Viewer, there are several different types of views:

- *Plan Views, see page 29*
- *3D Views, see page 60*
- *Cross Section/Elevation Views, see page 62*
- *Viewing a Layout File, see page 15*

Each view displays in a view window and can show the model from a different perspective. While multiple views can be open and display on screen, only one view window can be active at any given time. See *3D Views on page 60* and *Working in Multiple Views on page 29*.

- Plan, 3D, and cross section/elevation views are found in plan files only. Each view window can show the model from a different perspective and display a unique set of information about it, making them useful for a variety of drawing tasks and print requirements.
- Layout files are composed of multiple pages. A given layout view window can only display a single page at a time.

COORDINATE SYSTEM INDICATORS

In Chief Architect, the drawing area is laid out on a Cartesian grid, a three dimensional coordinate system described using the X, Y, and Z axes. As a reference, you can display one or more Coordinate and Origin Indicators in your views to help locate your model within this system. This can be particularly helpful in camera views or if you have rotated your drawing.

There are three types of Coordinate System Indicator:



The **Floating Axes Indicator** is always present at the lower left corner of a view window, regardless of the drawing space coordinates currently showing in the view. The length of the floating axes can be specified.



The **Fixed Axes Indicator** is always present at the drawing space Origin: 0,0,0 (0,0 in plan views, CAD Details, and layout) and may or may not be visible in the current view, depending on its extents. When visible, the fixed axes extend to the edges of the view window.



The **Origin Indicator** crosshairs are always present at the drawing space Origin. They are of a fixed size and may or may not be visible in the current view.

These Coordinate System Indicators can be turned on or off for different view types in the Preferences dialog. They can also be toggled on or off using the **View** menu.

You can specify that any camera, or cross section/elevation view be saved. See *Saving 3D Views on page 80*.

COORDINATE SYSTEM INDICATORS

In Chief Architect, the drawing area is laid out on a Cartesian grid: a three dimensional coordinate system described using the X, Y, and Z axes. Indicators for these axes as well as the drawing space origin at (0,0,0) can be set to display in a variety of view types to help you visualize your drawing's position and orientation in the coordinate system.

There are three types of Coordinate System Indicator:



The **Floating Axes Indicator** is always present at the lower left corner of a view window, regardless of the drawing space coordinates currently showing in the view. The length of the floating axes can be specified.



The **Fixed Axes Indicator** is always present at the drawing space Origin: 0,0,0 (0,0 in plan views, CAD Details, and layout) and may or may not be visible in the current view, depending on its extents. When visible, the fixed axes extend to the edges of the view window.



- The **Origin Indicator** crosshairs are always present at the drawing space Origin. They are of a fixed size and may or may not be visible in the current view.

You can specify which indicator(s) display in several different view types as well as control aspects of the indicators' appearance in the Preferences dialog.

VIEW SPECIFICATION DIALOGS

These view types have a specification dialog that allows you to various aspects of its content:

- *Camera Specification Dialogs, see page 81*
- *Cross Section/Elevation Specification Dialogs, see page 84*

CLOSING VIEW WINDOWS

There are a number of ways to close view windows. See *Closing Views and Files on page 33*.

Plan Views

When a plan file is opened, a plan view is active. Most Chief Architect files have a selection of different Saved Plan Views that show different information about the design. You can select the view you want to see from the **Saved Plan View Control**  **Plan View** ▼ drop-down in the toolbars.

You can create additional plan views for use during the current program session: select **Tools> New Plan View** . Each plan view that you create can show a different floor and have different view extents and Color setting.

Working in Multiple Views

There is no limit to the number of plan files that can be open, nor is there a limit to the number of view windows that can be open. The name of the file and the type of view is stated at the top of each view window in its title bar as well as in its tab. If the view is saved, its name displays instead of the view type.

By default, Chief Architect uses a tabbed document interface, which means that when more than one view window is open in the program window, each open window will have a tab that displays in a row above the currently active view.

- Each tab states the name of the file, the view type, and the view's name.
- Each tab features an icon indicating its type of view.
- Click on a tab to make it the active view.
- If there is not enough room in the program window to display all tabs, left and right arrow buttons allow you to scroll through the tabs.
- Tabs can be reordered by clicking and dragging.

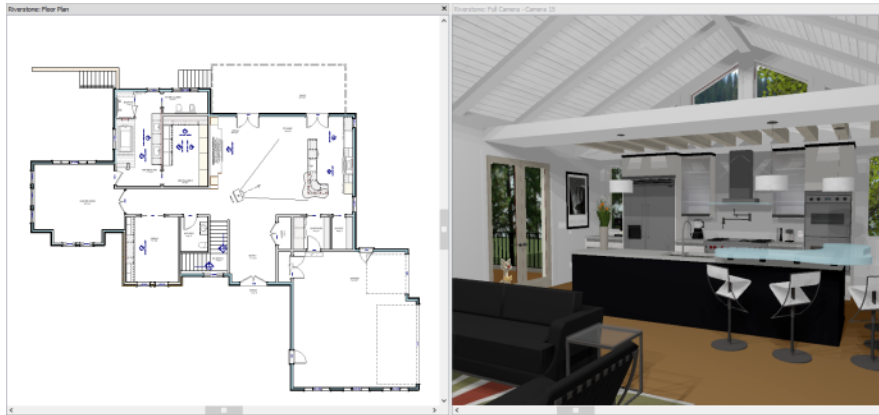
There is no limit to the number of 3D view windows that you can have open at a given time; bear in mind, though, that each window demands use of your computer's resources and that you may see poor performance if too many views are open. See *3D Views on page 60*.

There are several ways to close a view window. See *Closing Views and Files on page 33*.

TILING VIEWS



As an alternative to tabbed views, windows can instead be tiled. Tiling allows you to display multiple views in a single Viewer window so you can see the results of changes in plan view in 3D or vice versa. It can also be useful for copying objects from one plan to another.



A plan view and camera view Tiled Vertically

There are several ways to create tiled views:

- Click and drag a view window's title bar or tab into the part of the drawing area that you would like it to be. When a highlighted space is created, release the mouse button.
- Select **Window> Tile Horizontally** to display views in a horizontal orientation, one above the other.
- Select **Window> Tile Vertically** or press **Shift + F6** to display views in a vertical, side by side, orientation.

Views are tiled left to right or top to bottom in the order in which they were last active: the most recent view is on the left or at the top, while least recent is on the right or on the bottom.

- To activate a view, click on its title bar or anywhere in the view window. Note that any changes you make in the active window are reflected in other views as well.
- To end window tiling, select **Window> Tab Windows**. You can also end tiling by double-clicking on the title bar of the program window.

MULTIPLE PROGRAM WINDOWS

To create a second program window, click and drag the title bar or tab of a view window completely out of the current program window: for example, onto a second monitor. A second Viewer program window will be created with its own menu and toolbars.

SWAPPING VIEWS

There are a number of ways to switch between open view windows:

- Click on a view window's tab.
- Select **Window> Select Next Tab** or **Window> Select Previous Tab** to cycle through all open views in the order you prefer.
- In Windows®, press the **Ctrl + Tab** (Next Window) or **Ctrl + Shift + Tab** (Previous Window) keys to cycle through all open views.

- In macOS™, press the **⌘ + J** (Next Window) or **⌘ + Shift + J** (Previous Window) keys to cycle through all open views.
- A list of all the views currently open is located at the bottom of the Window menu. Each view is identified by its name and what type of view it is. A check mark is beside the view that is currently active. Select one to go directly to that view.

If more than eight view windows are open, **More Windows** will be the last item in the Window menu. Select this option to open the Select Window dialog:

Select the name of a view in the list and click **OK** to make it the active view.

View Tools

The **View Tools** allow you to open and close the program's side windows, as well as toggle a variety of references and drawing aides. Select the **View** menu to access these tools.



Refresh Display redraws the current window to clean up extra lines, show missing items, and correct random on-screen effects caused by changes to the model.



Tool Palette opens and closes the Tool Palette, which will display related tools.



Scrollbars displays and suppresses scrollbars on view windows.



Color toggles the display of color in the current view.



Crosshairs toggles the use of the blue crosshairs centered on the mouse pointer in most views.



Coordinate System Indicator - Floating toggles the Floating Axes Indicator in views of the current type in all files. See [Coordinate System Indicators on page 28](#).



Coordinate System Indicator - Fixed toggles the Fixed Axes Indicator in views of the current type in all files and can be added to the toolbars.



Coordinate System Indicator - Origin toggles the Origin Indicator in views of the current type in all files and can be added to the toolbars.

Zoom Tools



Zoom is used to magnify any given area on the plan or 3D view. Select **Window> Zoom**, then click and drag a marquee around an area on screen. When you release the mouse, the selected area expands to fill the screen.

Note that in 3D views, using **Zoom** does not reposition the camera. This can lead to inconsistencies between a camera's position and what is actually shown in the view if other methods of zooming are used later. See [Navigating in Camera Views on page 67](#).

When the zoom is complete, whatever tool was active prior to selecting the **Zoom** tool automatically becomes active again. If another zoom is needed, click the **Zoom** tool again.

These additional commands are also found in the **Window** menu:



Zoom In - Click to zoom in towards the screen center by a factor of two.



Zoom Out - Click to zoom out from the screen center by a factor of two.



Undo Zoom - Reverse the last zoom or fill window operation. This option is also found in the contextual menu, as is the **Zoom** tool. See [Menus, Toolbars, and Hotkeys on page 9](#).



Fill Window Building Only - Fits all walls and railings on the current floor on screen.



Fill Window - Fits all visible items on screen. See [Fill Window on page 32](#).

Note: Undo and Redo do not affect zoom.

Zooming With the Mouse Wheel



Use the mouse wheel to zoom in and out in all view windows. Scrolling the mouse wheel one click up or down zooms in or out, centering on the location of your pointer and changing the zoom by about 10%.

By default, zooming in 3D views changes the camera's position. See [Mouse Scroll Wheel and Trackpad on page 67](#).

Note: Depending on the configuration of your mouse, it may be necessary to hold down the **Ctrl/⌘** key while turning the mouse wheel.

Fill Window



In plan view or a cross section/elevation view, select **Window> Fill Window** or press the **F6** key to view nearly everything on screen that is visible, including the Reference Display. CAD Points are the only objects that are not included when Fill Window is used.

If you are zoomed in so that only a portion of the drawing displays on screen, selecting **Fill Window** zooms out so that the entire view fits on the screen. If you are zoomed out so that the entire drawing is smaller than the screen, selecting **Fill Window** zooms in until the drawing fills the screen.

When the drawing sheet is shown, **Fill Window** zooms to the sheet borders.

Fill Window Building Only



Window> Fill Window Building Only is similar to **Fill Window**, but zooms in or out so that all walls, railings, and roof planes in the view fill the current window. These objects are included in the extents of the view even if their layers are turned off. Other objects are ignored.

In 3D Views

In 3D views, the **Fill Window** tools adjust the camera's Field of View is adjusted so that all surfaces in the 3D view are included.

Panning the Display

There are a number of ways to pan the display without changing the zoom factor.

Using the Arrow Keys

In plan view, the Arrow keys work exactly like clicking the Arrow buttons on the scrollbar.

USING THE MOUSE

If you have a wheel mouse, you can pan the display by pressing the middle mouse button, or wheel, and moving the mouse in the direction you would like to pan. When the middle mouse button is held down, the pointer changes to a hand  icon.

In the Mac version of Chief Architect, you can pan using the left mouse button and Option key.

Mouse drivers sometimes have other functions assigned to the wheel and buttons. These override the Chief Architect setting.

USING A MAC TRACKPAD

In the Mac version of Chief Architect, you can two finger drag to pan the display. See [Trackpads on page 8](#).

USING THE PAN WINDOW TOOL

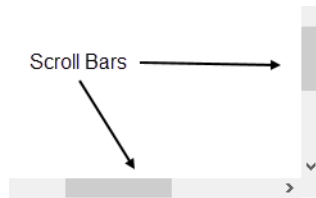


The **Pan Window** tool works much like the mouse wheel method.

- Select **Window> Pan Window**. The pointer changes to a hand  icon. Click and drag to pan the window. The program reverts to the previously active tool when you release the mouse button.

USING THE SCROLLBARS

One method is to use the scrollbars on the right and bottom edges of the window.



- Click the end arrow keys on the scrollbars to shift the display in 12" increments.

Closing Views and Files

If a view is still needed, you can swap to a different view without closing it. If, however, a view is no longer needed, it can be closed. There are several ways to close a view window:

- Select **File> Close View** to close the active window.
- Press **Ctrl/⌘ + W** or **Ctrl/⌘ + F4** to close the active window.
- Click the **Close** button in the active view's title bar or in any view's tab.
- A tabbed view can be closed by clicking on its tab using the middle mouse button.
- Select **File> Close All 3D Views**  to close all currently open camera view windows instead of just the active window.
- Select **File> Close All Views** to close all currently open view windows instead of just the active window.

If a plan has only one view window open and you try to close it, the program will prompt you to save before closing if there are any unsaved changes. See [Saving Plan and Layout Files on page 21](#).



Although the program warns you if you try to exit without saving, you should get in the habit of saving plan files before exiting.

Even if all view windows are closed, the program can still be open. See *Exiting Chief Architect on page 26*.

Displaying Objects

Chapter 4

Layers allow to you control which objects display in floor plan and camera views.

TOPICS

Layers	36
Layer Display Options Dialog	36
Layer Sets	37
Display Toggles	37
Select Color Dialog	38

Layers

Layers are used to organize and manage the display of all objects in all views. A layer can be thought of as a transparent sheet with objects placed on it for viewing. Nearly all views use multiple layers, like a stack of transparencies put together to show different types of objects.

You can specify whether each layer displays in a particular view in the Layer Display Options dialog. You can also find out which layer a Text object that you have drawn is on by selecting it and looking at the Status Bar. See [Layer Display Options Dialog on page 36](#) and [The Status Bar on page 12](#).

Multiple layers are organized into Layer Sets, which allow you to control which objects display in different views. See [Layer Sets on page 37](#).

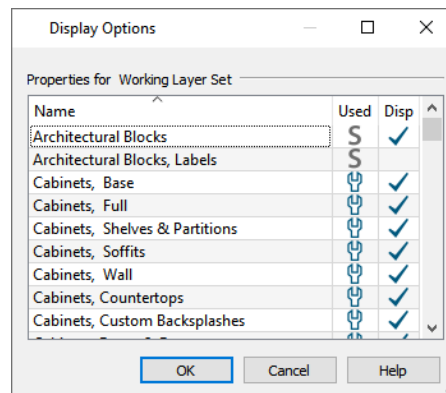
Layer Display Options Dialog



The Layer Display Options dialog controls the display of layers in the active layer set. From any view, select **Tools>Display Options** to open this dialog.

The Layer Display Options dialog consists of a table that lists all layers and their attributes.

To edit the attributes of the Reference Floor Layer Set, click the **Define** button in the Change Floor/Reference dialog. See [The Reference Display on page 58](#).



The layers in the Layer Display Options dialog can be sorted by either of its columns.

- An icon in the **Used** column indicates that the layer is in use. The information in this column can be sorted, but not edited here.
- Click in the **Disp** column to remove or add a checkmark. A checkmark indicates that the layer is set to display in the current view.
- Click **OK** to close the dialog and apply your changes.
- Click **Cancel** to close the dialog, ignoring any edits.

Note: Not all objects display in all views. For instance, invisible walls do not appear in camera views.

Layer Sets

Layer Sets are used to control the layer settings for different views in a plan or layout file.

A layer set consists of a complete list of the layers in the current plan or layout along with the display settings for each layer as set for a particular type of view. These display settings can be modified, and can be different for each type of view. See [Layer Display Options Dialog on page 36](#).

Layer sets are file specific, which means that changes made in one plan or layout file have no effect on the settings in other files.

Chief Architect uses a different layer set for each type of view of your plan:

- Plan views. See [Plan Views on page 29](#).
- Camera views and Overviews. See [3D View Tools on page 61](#).
- Cross Section/Elevation views.
- Wall Elevation Views.
- Framing Overviews. See [Framing Overview on page 64](#).
- Reference Floor. See [The Reference Display on page 58](#).

While any view is active, select **Tools> Display Options**  to make changes to the layer set used for that view type.

Any changes made to settings in the Layer Display Options dialog for one particular view will affect all views using that same layer set. For example, if you make changes for a camera view, all camera views and overviews in the current plan will be affected. See [Layer Display Options Dialog on page 36](#).

Display Toggles

There are a number of toggles and tools that can be used to affect the appearance of the on-screen display.

PRINT PREVIEW



Print Preview and its related display toggles allow you to get a sense of what the current view will look like when it is printed. See [Print Preview on page 97](#).

REFRESH DISPLAY



Refresh Display redraws the current window to clean up extra lines, show missing items, and correct random on-screen effects caused by changes to a model. Select **View> Refresh Display** or press the **F5** key to refresh the on-screen display.

COLOR ON/OFF



The display of color on-screen can be toggled on and off in any view by selecting **View> Color**.

- If **Color** is toggled off in any 3D view other than a Vector View, the view will be displayed in grayscale.
- If **Color** is toggled off in any line based view, including plan view, Vector Views, and layout, the view will be displayed in black and white.

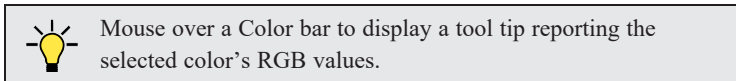
DELETE SURFACE



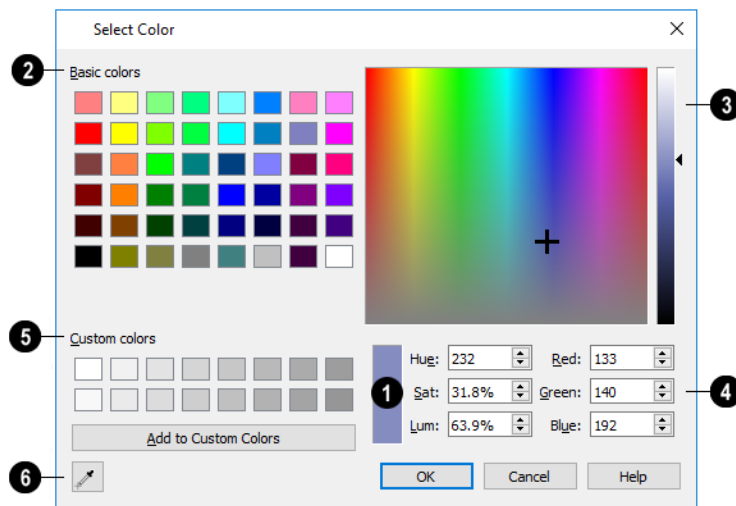
In any 3D view, select **3D> Delete Surface**, then click a surface in the view to temporarily remove the surface from the current view. See *Delete 3D Surface on page 66*.

Select Color Dialog

The Select Color dialog can be opened by clicking on the Color bar that can be found in many dialogs throughout the Windows version of the program.



In the Mac version, the standard Colors dialog, or Color Picker, is used instead.



1 Current Color

The currently selected color displays in the rectangle at the lower center of the dialog. There are a number of ways to select a color in this dialog.

2 Basic Colors

Click in any one of the color boxes to select it.

3 Color Spectrum

- Click anywhere in the color spectrum area to select a color. The location of the selected color is identified by crosshairs.
- Click anywhere in the vertical bar or drag the arrow to adjust the selected color's Luminosity and RGB values.

4 Color Definition

- Define a color by specifying its **Hue**, **Saturation**, and **Luminosity** (HSL) or its **Red**, **Green**, and **Blue** (RGB) values.

5 Custom Colors

- Click in one of the **Custom colors** boxes to either select it or to specify it as the box for a new custom color to be defined.
- Click the **Add to Custom Colors** button to add the selected color to the Custom Colors group.

6 Color Chooser Eyedropper

Click this button, then click anywhere on your monitor to select the color displaying at that location.

Click OK to apply the currently selected color to the object's line or fill style, or to the material's pattern color.

Text

Chapter 5

Text is a simple and effective way to communicate your thoughts and suggestions regarding a drawing. Text can be added in floor plan and cross section/elevation views, and to layout pages.

TOPICS

Fonts and Alphabets	41
The Text Tools	42
Creating Text	42
Displaying Text Objects	42
Rich Text Specification Dialog	43
Selecting Text Objects	46
Editing Text	47
Copying and Pasting Text Objects	49
Arrow Lines	51
Editing Polylines	52
Line/Polyline Specification Dialog	53
Deleting Objects	55

Fonts and Alphabets

Chief Architect allows you to use any font found in your computer’s Fonts directory.

INTERNATIONAL ALPHABETS

The **Rich Text**  tool supports unicode alphabets and characters. In order to use a unicode alphabet or characters, the appropriate language support must be installed on your computer. See *The Text Tools on page 42*.

Special characters can be added to any **Rich Text**  object by:

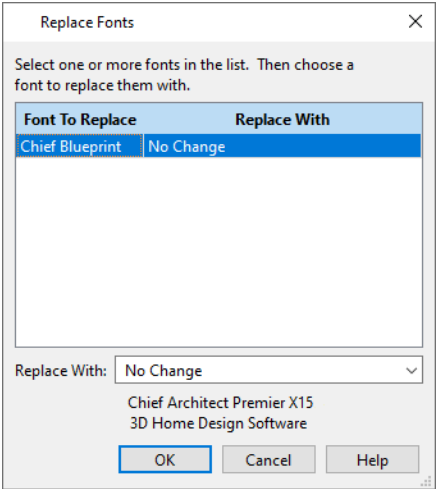
- Copying and pasting the character from another application;
- Copying and pasting the character from the Windows Character Map;
- Using the Mac Character Viewer;
- Typing the keystroke associated with the character.

See *Copying and Pasting Text Objects on page 49*.

REPLACE FONTS

 Select **Edit> Replace Fonts** to replace one or more fonts in the current file with a different font using the Replace Fonts dialog.

The Replace Fonts dialog will also open if you open a plan or layout file that uses a font that is not installed on the current computer, giving you an opportunity to replace that font.



The table lists all fonts in the current file and how they will be replaced.

- Click on a font name in the list to select it. Use the **Shift** or **Ctrl/⌘** key to select multiple fonts.
- Select a replacement font from the **Replace With** drop-down list, or leave “No Change” as the selection to maintain the file’s association with the missing fonts.
- A preview of the selected font displays below the **Replace With** list.

If this dialog opens in response to missing fonts and you do not plan to return the file to the computer where it was created, you may want to replace missing fonts with the fonts you normally use. On the other hand, if you do intend to return the file, you may prefer to not replace any missing fonts.

The Text Tools

T Select **CAD> Text** to access the **Text Tools**. These tools are available in plan view, in cross section/elevation views, and in layout files.



The **Rich Text** tool is used to create text objects. See [Creating Text on page 42](#).



The **Arrow Line** tool is used to make a connection between a feature of the design shown in the current view and a text object commenting on that feature. See [Arrow Lines on page 51](#).

Creating Text

Text can be created in plan view, in cross section/elevation views, and on layout pages. See [View Windows on page 28](#).

Once created, text can be selected and edited in a variety of ways. See [Editing Text on page 47](#).

To create Text

1. Select **Tools> Text** .
2. Click in the drawing area, and the Rich Text Specification dialog will open. See [Rich Text Specification Dialog on page 43](#).
3. Type or paste the desired text into the Text Field.
4. Use the options in the dialog to change the font, style and size of any portion of the text. See [Editing Text on page 47](#).
5. When you are finished, click OK. The **Text**  tool remains active, so you can create additional text objects if you wish.

Note: If you do not type anything in the Text Field, a text object will not be created when you click outside it.

You can also create lines with arrows connecting the text that you create to items in the drawing. See [Arrow Lines on page 51](#).

HYPERLINKS

 Hyperlinks that link to web pages both in the views they are created in as well as when printed to PDF can be added to Rich Text objects in their specification dialogs. See [Text Panel on page 43](#).

Displaying Text Objects

As with other types of objects, the display of Text objects is controlled in the Layer Display Options dialog. See [Layer Display Options Dialog on page 36](#).

Text objects can only be displayed in views where text can be created.

The display attributes of each individual text object can be controlled independent of the layer it is placed on. See [Rich Text Specification Dialog on page 43](#).

The display attributes of individual text objects, such as color and size, can be set in their specification dialogs. See [Rich Text Specification Dialog on page 43](#) and [Line/Polyline Specification Dialog on page 53](#).

Rich Text Specification Dialog

 The Rich Text Specification dialog opens if you select one or more Text objects, then click the **Open Object** edit button.

This dialog also opens when you select the **Rich Text**  tool and then click once in the drawing area.

When **Text** objects are group-selected, the text content, zoom factor, and Paragraph Options cannot be changed, but everything else can be.

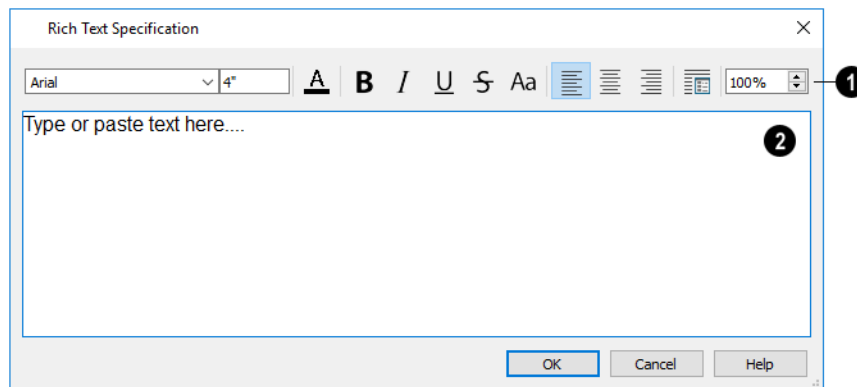
Arrow Lines  have their own specification dialog. See [Line/Polyline Specification Dialog on page 53](#).

TEXT PANEL

The settings on the TEXT panel allow you to type the selected Text object's content and control many aspects of its appearance, including its font, size, color and style.

You can specify the appearance of the text before typing, and can also select and change the attributes of all or portions of the text content after it is typed. To change text that already exists, simply highlight it using the mouse and/or the Shift + arrow keys and then make any needed changes to its attributes.

Note: If you do not type anything in the text field on this panel when creating a new object, no object will be created when you click OK. On the other hand, if you remove the text from an existing object and click OK, an empty text box will result.



1 Edit Bar

Use the options on the Edit Bar, which displays above the Text Entry field, to change the font, size, and style of the text.

Select the desired options before typing to affect the text as it is typed, or select some or all of the text and then specify which options to apply to it.

- Select a **Font** from the drop-down list.
- Specify the **Text Size** in drawing units.

- Click the **Color**  button to specify the color of the selected or subsequently typed text. See [Select Color Dialog on page 38](#).
- Click the **Insert Hyperlink**  button to insert text that links to a web address or edit an existing selected hyperlink. See [Hyperlinks on page 42](#) and [Insert Hyperlink Dialog on page 44](#), below.

Note: Hyperlink text is automatically underlined and assigned a non-default blue color. Once created, though, it is editable. To remove a hyperlink, select the linked text, right-click, and select Remove Hyperlink from the contextual menu.

- Click the **Bold**  button to specify the selected text as bold. The **Ctrl/⌘ + B** hotkey can also be used.
- Click the **Italic**  button to specify the selected text as italic. The **Ctrl/⌘ + I** hotkey can also be used.
- Click the **Underline**  button to specify the selected text as underlined. The **Ctrl/⌘ + U** hotkey can also be used.
- Click the **Strikethrough**  button to specify the selected text as stricken-through.
- Click the **Uppercase**  button to display the selected text in all capital letters.
- Click the **Align Left** , **Align Center** , or **Align Right**  button to specify how the selected text is aligned.
- Click the **Paragraph Options**  button to specify the selected paragraph's alignment, spacing and bullets or numbering in the Paragraph Options dialog.
- Specify the **Zoom** factor of the selected text by typing a percentage value in the text field or clicking the up/down arrows. This setting only affects the text as it appears in this dialog.

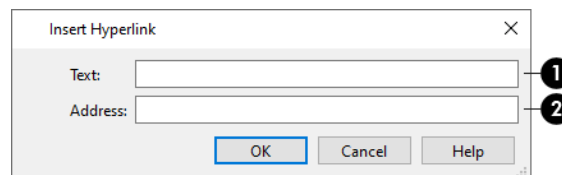
Note: Some fonts cannot be drawn at certain zoom factors. When this is the case, the appearance of the text will not change.

2 Text Entry Field

Type or paste text in the Text Entry field. See [Editing Text on page 47](#).

- Right-click in the Text Entry field to access a contextual menu from which you can select Undo, Redo, Cut, Copy, Paste and Select All. See [Contextual Menus on page 10](#).
- To edit text in the entry field, click and drag to highlight any portion of it and then use the tools on the Edit Bar as needed.

INSERT HYPERLINK DIALOG



1 Text

Specify the text of the hyperlink that the reader will see.

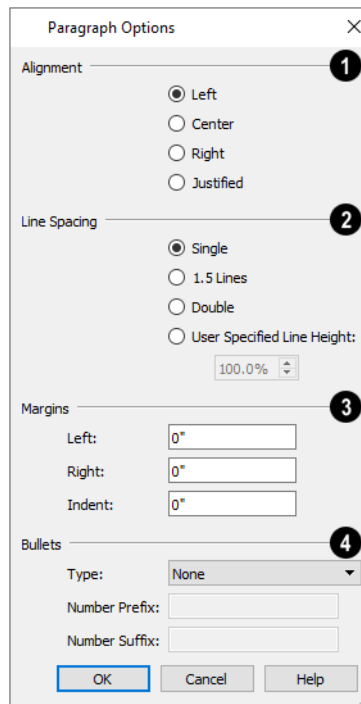
- If any text in the Rich Text Specification dialog is selected or if the cursor is located within an existing hyperlink when you click the **Insert Hyperlink**  button, it will populate the **Text** field. If you change this initial text, the selected text in the Rich Text Specification dialog will update when you click OK and return to that dialog.
- If no text is selected but the cursor is located within an existing hyperlink when you click the **Insert Hyperlink**  button, that hyperlink will essentially be selected: its text will populate the Text field and its address will populate the Address field.

2 Address

Specify the address, or URL, of the page that the link will access.

- If the **Address** field is empty when you click OK, the hyperlink will be removed.

PARAGRAPH OPTIONS DIALOG



The image shows the 'Paragraph Options' dialog box with four numbered callouts: 1 points to the 'Alignment' section, 2 points to the 'Line Spacing' section, 3 points to the 'Margins' section, and 4 points to the 'Bullets' section. The dialog includes radio buttons for alignment (Left, Center, Right, Justified), line spacing (Single, 1.5 Lines, Double, User Specified Line Height), and margins (Left, Right, Indent). It also has a 'Bullets' section with a 'Type' dropdown, 'Number Prefix', and 'Number Suffix' fields. At the bottom are 'OK', 'Cancel', and 'Help' buttons.

1 Alignment

Specify the **Alignment** of the selected paragraph(s).

2 Line Spacing

Specify the **Line Spacing** of the selected paragraph(s).

- Click the radio button beside **Single**, **1.5 Lines**, **Double** or **User Specified**.
- If you select **User Specified Line Height**, type the desired height in the text field. For best results, this value should be at least as much as the largest text size used in the selection.

3 Margins

Specify the appearance of the selection's side **Margins**, as measured in from edges of the text box. Only positive Margin

values can be used.

- Specify the **Indent**, which is measured from the left side margin. A negative value can be used if a left Margin has been specified.

4 Bullets

Specify the appearance of **Bullets** and numbering in the selection.

- Select the desired bullet, numbered, or lettered **Type** from the drop-down list.
- Specify the **Number Prefix**, which are any characters that you would like to display before the number or letter. Does not affect paragraphs using circle or square bullets.
- Specify the **Number Suffix**, which are any characters that you would like to display after the number or letter and before its actual text. Does not affect paragraphs using circle or square bullets.

Selecting Text Objects

"Select refers to selecting a Text object or Line/Polyline with Arrow for editing. Only objects added using Chief Architect Viewer can be selected and edited. An object must be selected before it can be edited. See [Editing Text on page 47](#).

There are a number of ways that objects can be selected:

Information about the selected object or objects will display in the Status Bar. See [The Status Bar on page 12](#).

A selected object remains selected until another object is selected, a different tool is activated, the **Esc** key is pressed, or any two mouse buttons are pressed at the same time.

SELECT OBJECTS

 Text objects and Arrow Lines created using Chief Architect Viewer's drawing tools can be selected using the **Select Objects** tool. Select **Edit> Select Objects**, click the toolbar button or press the **Spacebar** to activate this tool, then click on an object to select it.

You can also select these objects or open context sensitive menus using the right mouse button when any tool is active.

SELECT NEXT OBJECT

 If there is more than one Text object or Arrow Line in a particular space, it may be difficult to select the desired object. When a nearby object is selected, click the **Select Next Object** edit button or press the **Tab** key until the desired object becomes selected. This function cannot be applied to groups of selected objects.

SELECTING SIMILAR OBJECTS

If a tool other than **Select Objects**  is active, you can only select objects of that type using the left mouse button. For example, if the **Arrow Line**  tool is active, you can only select Arrow Lines and Polyline using the left mouse button.

Objects can be selected using the right mouse button, regardless of which tool is active.

RIGHT-CLICKING

Regardless of which tool is active, you can select an object by right-clicking on it once. When you right-click to select an object a contextual menu also appears, displaying the object's edit tools. See [Contextual Menus on page 10](#).

If a drawing tool is active and you right-click to select an object, you can unselect it by left-clicking in an empty space in the drawing area. Although a drawing tool is active, it is not used. If you then left-click a second time, the active tool will be used.

SELECTING MULTIPLE OBJECTS

Groups of objects can be selected by holding down either the **Shift** or **Ctrl/⌘** key when the **Select Objects**  tool is active and then clicking and dragging to draw a rectangular marquee around the objects to be selected. An object does not need to be completely enclosed by the marquee to be selected: it will be selected if the marquee includes only a small portion of it.

You can also select a group of objects by adding them to the selection set one by one. Select an object, hold down either the **Shift** or **Ctrl/⌘** key, and click additional objects to select them. To remove an object from a selection set, click on it once more with the **Ctrl/⌘** key pressed.

Both Text and Arrow Lines and polylines can be selected using this method, but the ability to edit the group-selected objects is limited when they are not the same object type.

Editing Text

Once created, **Text**  objects and **Arrow Lines**  can be selected individually or as a group and edited using the edit handles, the Edit Toolbar buttons, and their specification dialogs. See [Rich Text Specification Dialog on page 43](#).

Text objects can be edited using a variety of methods:

To select a **Text** object or **Arrow Line**, click on it using either the tool used to create it or the **Select Objects**  tool. See [Selecting Text Objects on page 46](#).

Sometimes, multiple **Text** objects or **Arrow Lines** are located close to one another, making it difficult to select a particular object. Click as close as you can to the desired object, then click the **Select Next Object**  edit button or press the **Tab** key until the object is selected.

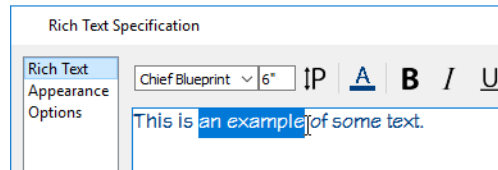
EDITING TEXT ATTRIBUTES

Most text attributes, including the font, size, style, and the content itself, are edited in the Text Specification dialog.

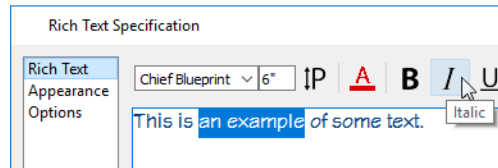
In order to edit the attributes of an existing **Text** object, you must select some or all of the text before making changes. See [Text Panel on page 43](#).

To edit Text attributes

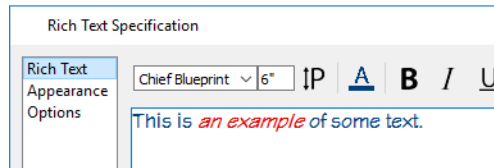
1. Select a **Text** object and click the **Open Object**  edit button.
2. On the **TEXT** panel of the Rich Text Specification dialog, click and drag to select some or all of the text typed into the Text field.



3. With some or all of the text selected, change any of the attributes available along the top of the panel, including the font, size, color, and style.

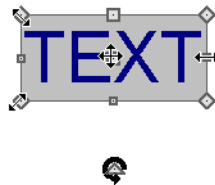


4. As changes are made, the selected text updates. Only the selected text is modified.



USING THE EDIT HANDLES

When a **Text** object or **Arrow Line** is selected, it displays edit handles. Use the edit handles to resize, extend/contract, move, and rotate the selected object.



As a text box's width is made narrower or wider using an edit handle, its height may increase or decrease so that none of the text becomes hidden. The opposite is not true, however: a text box's height cannot be resized smaller than the height of the rows of text it currently contains.

Arrow Lines can also be connected to form polylines that can be reshaped using the edit handles.



USING THE EDIT TOOLS

A selected **Text** object can be edited in a variety of ways using the buttons on the Edit Toolbar, which is located at the bottom of the program window when a Text object or Line with Arrow is selected.

A selected **Text** object or **Arrow Line** can be copied or deleted using the Edit Toolbar buttons.

To copy and paste an object

1. Click on the text or arrow line to select it.
2. Click the **Copy/Paste**  edit button.

3. Click anywhere in the drawing area to paste the copy at that location.
4. To make multiple copies, click the **Sticky Mode**  edit button before clicking in the drawing area. With **Sticky Mode** enabled, you can continue to click to paste as many copies of the object as needed.

When you are finished, click the **Main Edit Mode**  edit button or select another tool.

You can also **Cut** , **Copy** , and **Paste**  a selected object by selecting these options from the **Edit** menu. These are the same as the standard Windows commands.

To delete an object, select it and click the **Delete**  edit button or press the **Delete** key.

RESIZING TEXT

The character height of **Text** objects can be specified in their specification dialogs.

ALIGNING TEXT

The text content of a text object can be aligned to the left, right, center or justified in the Rich Text Specification dialog. See [Text Panel on page 43](#).

Copying and Pasting Text Objects

Text and Arrow Lines can be copied and pasted into plan views, cross section/elevation views, and layout pages. They cannot be pasted into 3D camera views, however.

There are a number of ways that objects can be cut, copied, and pasted:

CUT, COPY, AND PASTE

The Cut, Copy, and Paste tools allow you to copy a selection to the system clipboard and then paste it into a different view window, onto a different floor level, or even into a different application.



Select **Edit> Cut** or press **Ctrl/⌘ + X** to remove the selected object(s) from the file and save them in the system clipboard so that the selection can be pasted in a different location in Chief Architect or in another application, depending on the type of selection.



Select **Edit> Copy** or press **Ctrl/⌘ + C** to save a copy of the selected object(s) to the system clipboard while maintaining the original(s). The selection can then be pasted in a different location in Chief Architect or in another application, depending on the type of selection.



Select **Edit> Paste** or press **Ctrl/⌘ + V** to enable Paste mode, then left- or right-click in the current view to paste the selected object(s) previously copied to the system clipboard at that location. If pasting from another application, click in the destination view in Chief Architect first to make sure it is active.

To Cut, Copy, and Paste Text Objects

1. Select a text object or objects to copy, then:
 - Select **Edit> Cut** or press **Ctrl/⌘ + X** to remove the original selection from the file and copy it to the system clipboard.
 - Select **Edit> Copy** or press **Ctrl/⌘ + C** to copy the selection to the clipboard while retaining the original.
2. If you wish to paste the copy in a different view or program window, open that window and click in it to make it active.
3. Select **Edit> Paste** from the menu or press **Ctrl/⌘ + V**.
4. When pasting in Chief Architect, the mouse pointer will display the Copy/Paste  icon. Left- or right-click once to paste a copy of the object at that location.

Ctrl/⌘ + X, **Ctrl/⌘ + C**, and **Ctrl/⌘ + V** can also be used to cut, copy, and/or paste text in Text field of the Rich Text Specification dialog. The menu commands are not available when this dialog is open, however. See [Rich Text Specification Dialog on page 43](#).

To Copy, Cut and Paste text characters

1. On the TEXT panel of the Rich Text Specification dialog , or in another program altogether, highlight the text you wish to cut, copy or paste.
2. Press **Ctrl/⌘ + X** to **Cut** the selected text out of its original location and save it to the system clipboard.
3. Press **Ctrl/⌘ + C** to **Copy** the selected text to the system clipboard without removing it from its original location.
4. Open the Rich Text Specification dialog of a different text object or a file in another application and click to place your cursor in the Text field, writing area, or spreadsheet cell.
5. Press **Ctrl/⌘ + V** to **Paste** the copied text into the view.

Bear in mind that when text is copied and pasted, its formatting is not always retained. The results depend on the program in which the content was created.

COPY/PASTE

 The **Copy/Paste** edit tool allows you to copy the selected object(s) to the system clipboard and immediately enable the Paste function so that a copy can be made in the current view. Edit handles and a variety of edit tools let you control the location, orientation, and shape of the pasted object(s).

To Copy/Paste by clicking

1. Select an object or objects to copy.
2. Click the **Copy/Paste**  edit button. The cursor displays the Copy/Paste  icon.
3. Left- or right-click once to paste a copy of the selection at that point where you clicked.

The Copy/Paste edit tool can be used in combination with the original selection's edit handles to move, rotate, or reshape the copy relative to the original. The available edit handles will vary depending on the type and number of objects selected. See [Edit Handles on page 11](#).

To Copy/Paste by dragging

1. Select an object or objects to copy.
2. Click the **Copy/Paste**  edit button. The cursor displays the Copy/Paste  icon.
3. Click and drag an edit handle:
 - Drag the Move edit handle to position the copy at a new location. As you drag, a preview of the selection follows the mouse pointer.
 - CAD lines and some line-based objects have a round Orthogonal Move edit handle. When dragged, movement is restricted to directions that are perpendicular to the selected line.
 - Other types of CAD and CAD-based objects have a round Concentric Resize edit handle. Click and drag this handle to create a concentric copy that is either larger or smaller than the original.
 - Drag a corner handle to create a copy in the same location as the original but with a different shape.
 - Drag the Rotate handle to create a copy in the same location as the original, but rotated to a different angle.
4. You can position the copy accurately with respect to the original by watching the moved distance in the Status Bar at the bottom of the screen.

STICKY MODE

 Normally, after an action is performed using the edit tools or handles while in Paste mode, you return to the Main Edit Mode. Click the **Sticky Mode** edit button to remain in Paste mode and continue pasting copies of the selected object(s).

To exit Paste mode and return to the main Edit Toolbar for the selected object, click the **Main Edit Mode**  edit button, or press the **Esc** key. You can also click the **Sticky Mode** button once more.

Arrow Lines

Arrow Lines can be used to connect text objects to details of interest in your drawing.

ARROW LINE

 Select **Tools> Arrow Line** and then click and drag to draw an Arrow Line that can attach to Text objects and point to whatever you wish in the drawing.

The endpoints of Arrow Lines can be joined to form polylines with corners that can be adjusted using the edit handles.

ATTACHING TEXT ARROWS TO OBJECTS

An Arrow Line can be attached to a Text object anywhere within its bounding box in plan view, but attaches to a closed polyline-based object along its edges.

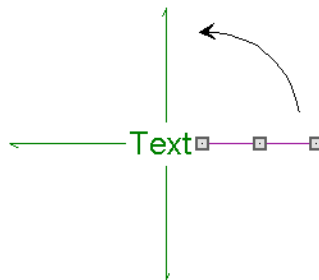
Arrow Lines that have the same Line Style and Arrow attributes can be snapped together to form open or closed polylines. If two lines with arrows meet within the bounding box of a text object, however, they will not join. This allows you to attach multiple, separate text arrows to a single text object.

Arrow Lines can be independent or attached to other objects at both their tail and head ends. Arrows attach to closed polyline-based objects along their edges, but can attach to Text or an architectural object anywhere within its bounding box in plan view.

- When a selected Arrow Line is attached to an object on either end, its end edit handle will display a red fill color.
- If an attached object is moved, the end of the Arrow Line will move, as well.
- If a text arrow is attached to text or another object, deleting either the text or the object will also delete the text arrow.

AUTO POSITION ARROWS

The following image illustrates the behavior of Auto Positioning. When the head of the arrow line is moved, the tail of the arrow snaps to different Auto Position locations on the text object, maintaining its connection.



Editing Polylines

Arrow Polylines are created when multiple Arrow Lines are connected end-to-end. Polylines are described as open when they do not form an enclosed area; when they enclose an area, they are referred to as closed polylines.

USING THE EDIT HANDLES

When selected, an open polyline-based object displays a Move handle, a Rotate handle, a Reshape handle at the intersection of each segment, and an Extend handle at each end.

When selected:

- An open Arrow Polyline displays a Move handle, a Rotate handle, a Reshape handle at the intersection of each segment, and an Extend handle at each end.
- A closed Arrow Polyline displays a Move handle, a Rotate handle, and a Reshape handle at the intersection of each segment.

Each straight, line-based segment also has a Move edit handle along its length.

Any action performed using the edit handles can be canceled by pressing the *Esc* key or any two mouse buttons at the same time.

USING THE SPECIFICATION DIALOG



Arrow Polylines can be edited using their specification dialogs. See [Line/Polyline Specification Dialog on page 53](#).

USING THE EDIT TOOLBAR

A selected Arrow Polyline can be edited in a variety of ways using the buttons on the Edit Toolbar.

The following toolbar buttons may display on the Edit Toolbar for a selected Arrow Polyline:

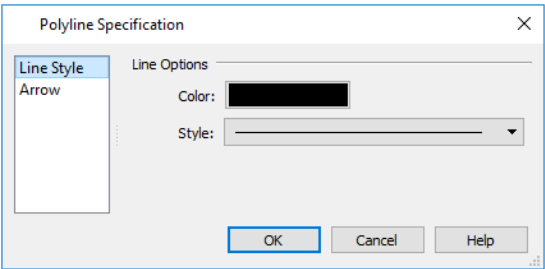
-  **Select Next Object** selects nearby objects instead of the selected object. See [Selecting Text Objects on page 46](#).
-  **Open Object** opens the specification dialog for the selected object. See [Specification Dialogs on page 10](#).
-  **Copy/Paste** copies the selected object(s) to the system clipboard so they can be pasted elsewhere. See [Copying and Pasting Text Objects on page 49](#).
-  **Delete** deletes the selected object(s). See [Deleting Objects on page 55](#).

Line/Polyline Specification Dialog

 Select an Arrow Line and click the **Open Object** edit button to open the Line Specification dialog. If the object is composed of multiple segments, the Polyline Specification dialog will open instead.

The Line Specification dialog has the following panels:

LINE STYLE PANEL

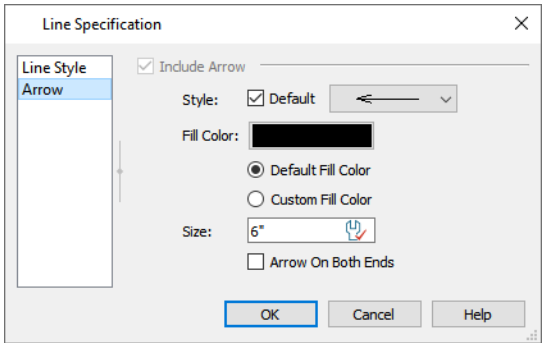


- Click the **Line Color** box to specify a new line color. See [Select Color Dialog on page 38](#).

 Mouse over the Color bar to display a tool tip reporting the selected color's RGB values.

- Click the **Line Style** drop-down list to select from a variety of available line styles.

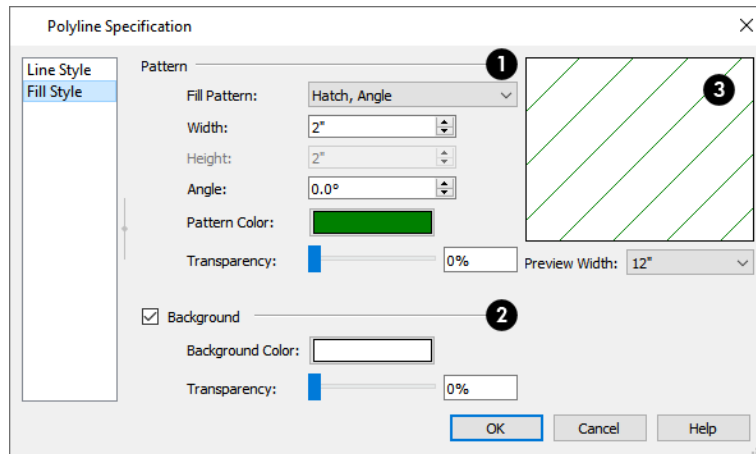
ARROW PANEL



- Check **Include Arrow** to create an arrowhead at the end of the selected Arrow Line or open Arrow Polyline.
- Select an arrowhead **Style** from the drop-down list. Check the **Default** box to use the default arrow Style.
- Click the **Fill Color** box to select a color for the arrowhead to be used if a solid Style is selected. See [Select Color Dialog on page 38](#).
- Select **Default Fill Color** to use the default color for text arrows in the current plan.
- **Custom Fill Color** becomes selected automatically if you choose a custom color above.
- Specify the arrowhead's **Size**. The Active Defaults  icon indicates that default size is being used.
- Check the box beside **Arrow On Both Ends** to create a two-headed arrow.

FILL STYLE PANEL

The FILL STYLE panel is available for Arrow Lines consisting of multiple segments that form a closed polyline shape. It is not available for lines or open polylines.



1 Pattern

Select a **Fill Pattern** from the drop-down list and specify its characteristics.

2 Background

Check **Background** to add a solid background color to the fill pattern and enable the settings below. When unchecked, the fill pattern has a transparent background. Not available when “Solid” is the selected Pattern Type.

- Specify a custom **Background Color** by clicking the color bar.
- Use the **Transparency** slider bar or text field to control how transparent the background color is.

3 Preview

A preview of the selected pattern displays to the right. As changes are made to the settings on this panel, the preview will update.

- Choose a **Preview Width** from the drop-down list. This value controls how large an area the preview represents. The selected value indicates the horizontal width of the preview pane in actual plan inches (mm).

Deleting Objects

Objects that you have drawn in Chief Architect Viewer can be deleted in several ways: select an object or group of objects, then click the **Delete**  edit button, select **Edit> Delete**  from the menu, or press the **Delete** key on your keyboard.

Objects that are a part of the original drawing cannot be selected, edited, or deleted in Chief Architect Viewer.

DELETE SURFACE



In any 3D view, select **3D> Delete Surface**, then click a surface in the view to temporarily remove the surface from the current view, allowing you to see what is behind it.

Multiple Floors

Chapter 6

Chief Architect plan files can have up to 30 floors, plus a foundation and attic. Chief Architect Viewer allows you to view all of them in a variety of ways.

TOPICS

Displaying Floor Levels	57
The Current Floor	57
The Reference Display	58

Displaying Floor Levels

Chief Architect Viewer allows you to view the floor levels in a plan in a variety of ways.

IN PLAN VIEW

In plan view, only one floor level can be active for editing at a time. This is referred to as the Current Floor. See [The Current Floor on page 57](#).

In addition to the Current Floor, one other floor can be displayed for reference purposes: the Reference Floor. Objects on the Current Floor can snap to those on the Reference Floor, helping you align objects. See [The Reference Display on page 58](#).

IN 3D VIEWS

In 3D views, all floor levels in a plan are visible, with one exception: **Perspective Floor Overviews** , which show the Current Floor, not including its ceiling, plus any floors beneath it.

In 3D views, all floor levels in a plan are visible, from the foundation up to the attic. There are two exceptions:

See [3D View Tools on page 61](#).

The Current Floor

In a given plan view window, only one floor level can be active at any given time. The active floor is referred to as the **Current Floor**.

If you would like to view two different floor levels side by side, open a second plan view, navigate to the desired floor, and then tile the two views. Although both are visible, only one of these view windows is active. See [Working in Multiple Views on page 29](#).

FLOOR UP / FLOOR DOWN



If you are working with more than one floor, you can select **Tools> Floor/Reference Display> Up One Floor** or **Down One Floor** to switch from one floor to another.

You can change the Current Floor in floor plan and 3D views. The Current Floor displays on the **Change Floor/Reference**  button, which can be found between the **Down One Floor** and the **Up One Floor** buttons.

Floors become available once they have been built. The Attic and foundation levels are also accessible using these tools.

CHANGE FLOOR / REFERENCE

1 If there are multiple floors, select **Tools> Floor/Reference Display> Change Floor/Reference** to open the Change Floor/Reference dialog, where you can select both the Current Floor and which floor is used in the Reference Floor. See [The Reference Display on page 58](#).

The Reference Display



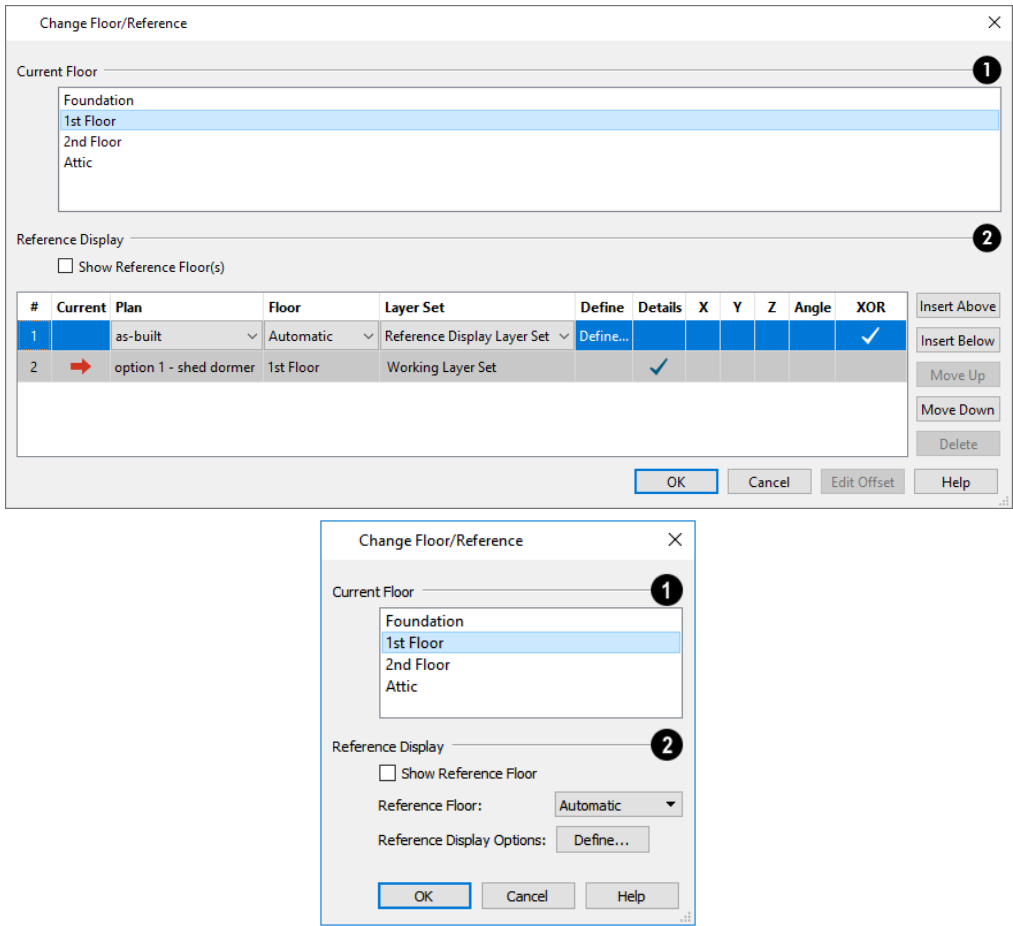
When a model has more than one floor level, it is often helpful to see how they relate to each other in plan view. Select **Tools> Floor/Reference Display> Reference Display** to turn on the display of an additional reference floor along with the Current Floor.

CHANGE FLOOR / REFERENCE DIALOG

- 1** Select **Tools> Floor/Reference Display> Change Floor/Reference** or click the toolbar button that reports the current floor level. See *The Current Floor on page 57*.

In the Change Floor/Reference dialog, you can specify which floor level is the Current Floor. You can also specify a Reference Floor from one or more different plan files, multiple Reference Floors, and Reference Floor layer sets and drawing order here, as well.

When this dialog is accessed from a camera view, only the Current Floor options will be active.



1 Current Floor

The **Current Floor** is highlighted here. Select another floor from the list to make it the Current Floor instead.

2 Reference Display

These settings are only available when a plan view is active.

- Check **Show Reference Floor** to turn on the display of the Reference Floor.
- Choose the current **Reference Floor** from the drop-down list. When “Automatic” is selected, the floor level below the Current Floor is always used; if there is no floor below, the floor above is used instead.
- Click the **Define** button to open the Layer Display Options dialog and change the settings for the Reference Floor Layer Set. See *[Layer Sets on page 37](#)*.

3D Views

Chapter 7

Little preparation is needed to create a 3D view of a model: simply click a button to create an overview or click and drag to create a camera or cross section/elevation view.

TOPICS

Camera Defaults Dialogs	61
3D View Tools	61
Creating Camera Views	62
Creating Overviews	63
Cross Section/Elevation Views	64
Displaying 3D Views	65
Navigating in Camera Views	67
Gamepad Settings Dialog	71
Editing 3D Views	73
Cross Section Slider	75
Virtual Reality	75
Saving and Printing 3D Views	80
Camera Specification Dialogs	81
Cross Section/Elevation Specification Dialogs	84

Camera Defaults Dialogs



There are several defaults dialogs for cameras, which can be accessed by selecting **Edit> Default Settings**. In the Default Settings dialog, click the arrow next to “Camera Tools”, then select a subheading and click the Edit button to open the defaults dialog associated with your selection.



There are several defaults dialogs for cameras, which can be accessed by selecting **3D> Edit Camera Defaults**. Select an item in the submenu to open the defaults dialog associated with your selection.

The settings in the Camera Defaults dialogs control the initial use of effects that improve the appearance of 3D views. Select **3D> Edit Camera Defaults** to open these dialogs.

Once a camera is created, its attributes can be customized. See [Editing 3D Views on page 73](#).

FULL CAMERA DEFAULTS

Specify the initial attributes of cameras created using the **Full Camera**  tool. See [Camera Views on page 62](#).

The settings in this dialog are the same as those the Full Camera Specification dialog.

PERSPECTIVE FULL OVERVIEW DEFAULTS

Specify the initial attributes of cameras created using the **Perspective Full Overview**  tool. See [Full Overview on page 63](#).

The settings in this dialog are the same as those in the Perspective Full Overview Specification dialog.

PERSPECTIVE FLOOR OVERVIEW DEFAULTS

Specify the initial attributes of cameras created using the **Perspective Floor Overview**  tool. See [Floor Overview on page 63](#).

The settings in this dialog are the same as those in the Perspective Floor Overview Specification dialog.

CROSS SECTION/ELEVATION DEFAULTS

Specify the initial attributes of cameras created using the **Cross Section/Elevation**  tool. See [Cross Section/Elevation Views on page 62](#).

The settings in this dialog are also found in the **Cross Section/Elevation Specification** dialog. See [Cross Section/Elevation Specification Dialogs on page 84](#).

3D View Tools



Select **3D> Create Camera View** to display the Camera View Tools.

There are three types of 3D Views:

CAMERA VIEWS



The **Full Camera** tool creates multi-floor views of the 3D model. It can be used to create interior and exterior perspectives, and is good for displaying cathedral ceilings, roofs, lofts, stairwell openings, and other variation in floor and ceiling levels.

OVERVIEWS



The **Full Overview** tool creates views of the entire model including all floors, ceilings, and the roof.



The **Floor Overview** tool creates views of the current floor with the ceiling removed and all floors beneath it visible.



The **Framing Overview** tool creates views of the framing in the model. Framing must be present in the plan in order for it to display in a framing overview. See [Framing Overview on page 64](#).

CROSS SECTION/ELEVATION VIEWS

Cross Section/Elevation views are similar to the traditional, scaled orthographic views often used in drafting. They are scaled and can be fully annotated. See [Cross Section/Elevation Views on page 64](#).



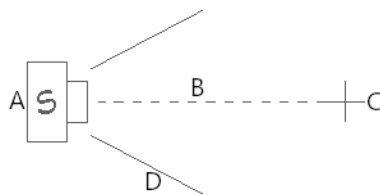
A **Cross Section/Elevation** view displays all floors of the model. If the view is created outside the structure looking toward it, the result is an exterior elevation. If the view is created inside the structure, or passes through any of the structure, a cross section is created.

Creating Camera Views

All Camera views are created using the same method.

To create a camera view

1. In plan view, select the desired camera tool. The mouse pointer displays the camera  icon.
2. Click and drag a line to define the view direction.



- A. Camera Position (click)
- B. Line of Sight (drag)
- C. Focal Point (release)
- D. Field of View

- The camera's position is where you click to begin the line.
- The line that you drag defines the direction the camera is pointed.
- The end of the line is the focal point of the view, the point the camera rotates around.
- The Field of View is 55°.

3. When you release the mouse button, a view generates in a new window.
4. Return to the plan view. A camera symbol now displays in plan view. See *Working in Multiple Views on page 29*.

A new camera can also be created by copying and pasting an existing camera symbol selected in plan view. See *Copying and Pasting Text Objects on page 49*.

CAMERA HEIGHT

By default, Cameras are created at a height of 60" (1500 mm). Where this height is measured from depends on the location of the camera:

- If the camera is inside a room, it is measured from that room's subfloor.
- If the camera is located in neither a room nor within the Terrain Perimeter, it is measured from the default height of the subfloor for the current floor.

Once created, a camera's height can be modified in its Camera Specification dialog. See *Camera Specification Dialogs on page 81*.

Creating Overviews

In Chief Architect, there are three different overview types: Full, Floor, and Framing Overviews.

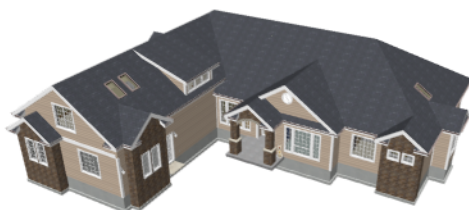
Overviews generate as soon as you select the tool and are always created at the same 120° angle. The initial focal point is located at the center of the architectural model: the terrain is not taken into consideration determining its position. The distance of the camera from the model will vary depending on its size: the larger the architectural model, the further away the camera will be from the focal point so that the entire model can be seen in the view.

Once generated, an overview window's title bar indicates its view type and a camera symbol in plan view represents its location. An overview camera can be edited much like regular camera views can. See *Editing 3D Views on page 73*.

FULL OVERVIEW



Select **3D> Create Camera View> Perspective Full Overview** to generate an exterior view of the entire model.

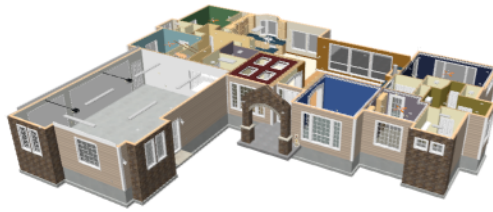


FLOOR OVERVIEW



Select **3D> Create Camera View> Floor Overview** to create a view of the current floor with the ceiling removed and all floors beneath it visible.

Floor Overviews are an effective tool for illustrating traffic flow and the relationships between spaces.

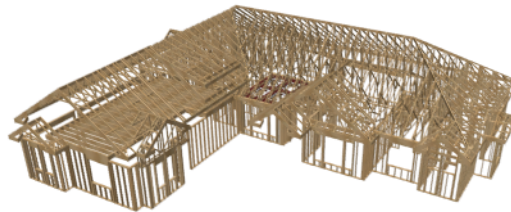


To see a different floor, select **Tools> Floor/Reference Display> Up One Floor**  or **Down One Floor** . You can also return to plan view and make another floor current before generating the Floor Overview.

FRAMING OVERVIEW



Select **3D> Create Camera View> Framing Overview** to create a view of the entire model, displaying only framing and the foundation.



Framing overviews include all floor, wall, and roof framing as well as foundations.

Cross Section/Elevation Views

Cross section/elevation views are the only 3D views that can be annotated with the Text tools. If Text is added to a cross section/elevation view, the program will prompt you to save the view before closing the window. This information is then stored in the view. See [Text on page 40](#).

CREATING CROSS SECTION/ELEVATION VIEWS



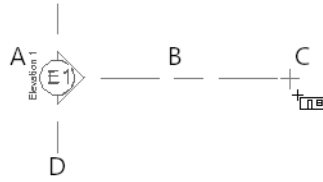
A **Cross Section/Elevation** view displays all floors of the model. The cross section begins at the point where the camera arrow is drawn and continues through the entire model.



The **Wall Elevation** tool creates an interior elevation of a single wall defining the room that the camera is drawn in. It creates a 2D projection of that wall and the objects located between that wall and its Cross Section Line; does not cut through walls or show the ceiling, floor, or roof; and is used primarily for kitchen and bath elevations. This tool cannot be used to create exterior views.

To create a cross section/elevation view

1. Select the **Cross Section/Elevation**  or **Wall Elevation** tool. The pointer changes to a  with crosshairs marking the position of the pointer.
2. Click and drag a line in plan view.
 - A Camera symbol displays where you click, along with a Cross Section Line indicating the plane of the camera's cross section cut line.



- A. Camera location (click)
- B. Line of Sight (drag)
- C. Focal Point (release)
- D. Cross Section Line

3. Drag in the direction of the Line of Sight to draw a camera arrow.
 - Always drag the camera arrow perpendicular to the wall to be viewed.
4. When you release the mouse button, the view generates in a new window.
5. Once created, a cross section/elevation view's extents can be edited. See [Cross Section/Elevation Specification Dialogs on page 84](#).

A new cross section/elevation view can also be created by copying and pasting an existing cross section/elevation camera symbol selected in plan view. See [Copying and Pasting Text Objects on page 49](#).

If the Line of Sight does not cut through a 3D object and the object is within the back clipped distance, such as a window shown in elevation, the object retains its 3D definition and can be selected, moved, stretched, or otherwise modified in the view. The 3D model is updated in all views.

Displaying 3D Views

A variety of tools and settings allow you to control the appearance of 3D views. There are also numerous ways to adjust a 3D view's position, focal point and field of view. See [Editing 3D Views on page 73](#).

The name of the current plan file and the type of view displays at the top of each view window in its title bar. If a 3D view is saved, its name also displays.

There is no limit to the number of 3D view windows that you can have open at a given time; bear in mind, though, that each window demands use of your computer's resources and that you may see poor performance if too many views are open. See [Working in Multiple Views on page 29](#).



The 3D model will rebuild automatically as you draw; however, if you notice any anomalies in the model in 3D, select **3D> Rebuild 3D** to regenerate all 3D data associated with the current plan. All open views will remain open.

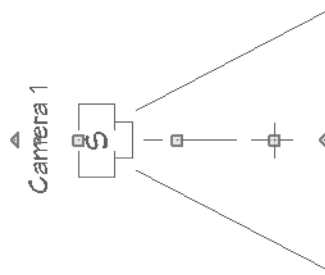
LAYER DISPLAY OPTIONS

As in plan view, the display of objects in 3D views can be controlled by layer. See [Layer Display Options Dialog on page 36](#).

Different view types use different layer sets when they are created. See [Layer Sets on page 37](#).

IN PLAN VIEW

Cameras are represented in plan view by symbols that indicate the camera's position, field of view and focal point.



You can also display camera symbols for saved cameras when the “Cameras” layer is turned on. See [Layers on page 36](#).

The symbols for Elevation views and Full Overviews display on all floors, while those for Full Cameras and Doll House Views display only on the floor where the view was created. See [Creating Camera Views on page 62](#).

You can move a camera to a different floor by clicking the **Up One Floor**  or **Down One Floor**  button while the camera view is active. Note that this may affect what is seen in the view as well as its display in plan view. See [Floor Up / Floor Down on page 57](#).

Both saved and unsaved active cameras can have labels indicating the camera number or its name. Camera labels are located on the “Cameras, Labels” layer.

Camera labels are numbered sequentially in each plan in the order they were created.

Camera symbols are an on-screen reference: they do not print unless **Print Image** is used

IN RENDERED VIEWS

There are a number of factors that contribute to the appearance of rendered 3D views:

- Select **View> Color**  to toggle between color and grayscale in 3D views. See [Color On/Off on page 37](#).

IN VECTOR VIEWS

There are also a number of factors that affect the appearance of 3D Vector Views:

- Select **3D> Toggle Patterns**  in a Technical Illustration or Vector View to turn on or off the display of the “Patterns, 3D Views” layer, which controls the display of material pattern lines. See [Layers on page 36](#).
- Select **View> Color**  to toggle between color and black and white to control the display line and fill colors.

DELETE 3D SURFACE



The individual surfaces that make up objects can be temporarily removed from any 3D view by selecting **3D> Delete Surface** and then clicking on a surface. When the pointer is over a surface, that surface will become highlighted.

Surfaces removed in one view are removed in all 3D views, but are not permanently removed from the model. Continue clicking surfaces to remove them, then select another tool when you are finished.

Surfaces in 3D views are composed of multiple triangles. Hold the **Alt** key while clicking to delete one triangular face at a time rather than all triangles forming a surface.

To restore the most recently deleted surface, select **3D> Delete Surface**  or click the toolbar button.

There are several ways to restore all deleted surfaces:

- Select **Build> Floor> Rebuild Walls/Floors/Ceilings** .
- Exit the 3D view and reopen it.
- Create a new 3D view.

Navigating in Camera Views

Once a 3D view is created, there are many ways to manipulate the camera location and the direction of its line of site using the mouse, the keyboard, and the menus.

When the keyboard, toolbar buttons, or menu commands are used to move or rotate a camera, the adjustments occur in regular increments. The size of these increments is specified in the Camera Specification dialog:

- The **Incremental Move Distance** controls Panning movement and forward and backward Dolly movement.
- The **Incremental Rotate Angle** controls Orbit movement, Tilt movement, and side to side Dolly movement.

See [Camera Specification Dialogs on page 81](#).

Each time you move the camera, the view is updated. If you are using either the toolbar or keyboard to move the camera, you can hold down the **Shift** key, suppressing the redraw of the view until the **Shift** key is released and allowing you to move multiple increments more quickly.

 Press the **Ctrl/⌘ + Alt + S** keys while in a camera view or overview to spin the view. To stop the spinning, press the **Esc** key.

You can also move a camera to a different floor by clicking the **Up One Floor**  or **Down One Floor**  button while the camera view is active. Note that this may affect what is seen in the view as well as its display in plan view. See [Floor Up / Floor Down on page 57](#).

MOUSE SCROLL WHEEL AND TRACKPAD

3D views can be panned and zoomed when any tool is active using the mouse scroll wheel or trackpad gestures. See [Trackpads on page 8](#).

The program adjusts the speed of these actions depending on characteristics of the camera:

- Zoom speed depends on how close the camera is to the object located behind the mouse pointer. When the target object is far from the camera, zooming is faster; as the camera gets closer to the target, zooming slows.
- Panning speed depends on the length of the camera's Line of Sight. In general, it is likely to be faster in an exterior view of a large model, slower in an interior view of a small room. See [Creating Camera Views on page 62](#).

By default, panning and zooming adjusts the position and direction of the camera. It does not, however, adjust the distances at which surfaces are clipped. This means that if you zoom in closely on an object, some of its surfaces may be removed from the view. One way to avoid this is to lower the camera's **Clip Surfaces Within** value in the Camera Specification dialog. See [Camera Specification Dialogs on page 81](#).

3DCONNEXION® 3D MICE

3Dconnexion®'s 3D mice can be used to navigate in all views - including camera views and overviews.

In the Windows version of Chief Architect, preprogrammed view direction hotkeys are supported on devices with buttons for that purpose. MacOS™ does not provide mapping support to the view direction commands.

Rolling is not supported in Chief Architect. In addition, 3D mice cannot be used to move the mouse pointer. For details about using your 3D Connexion® mouse, refer to its documentation.

GAMEPADS



In the Windows version of Chief Architect, gamepads can be used to navigate in camera views, overviews, and elevation views. To use a gamepad in Chief Architect, Select **Tools> Toolbars and Hotkeys> Gamepad Settings**, then check **Enable Gamepad** in the Gamepad Settings dialog. You can also adjust the sensitivity and other aspects of thumbstick functionality when used in Chief Architect. See [Gamepad Settings Dialog on page 71](#).

MOVE CAMERA WITH MOUSE



An active camera's position can be edited using the mouse. Select **3D> Move Camera With Mouse** to access the Move Camera with Mouse modes, select a mode, and use the left mouse button for the primary behavior or the right mouse button for the secondary behavior. These tools are not available in cross section/elevation views.

Tool	Primary Behavior (Left-Click)	Alternate Behavior (Right-Click)
Mouse-Orbit Camera 	Left-click and drag to rotate the camera around its focal point. The camera's position and direction both change. You can temporarily activate Mouse-Tilt Camera by using the right mouse button while the Mouse-Pan Camera or Mouse-Tilt Camera mode is active. To continuously rotate the camera around its focal point, left-click in the 3D view, drag the mouse, and release the mouse button to "throw" the view. Click again in the view to stop it from rotating.	Right-click and drag to tilt the camera instead of orbiting.
	In the Mac version of the software, you can temporarily activate Mouse-Orbit Camera while another tool is active: hold down the Option + Shift keys, then left-click and drag. When the mouse button and keys are released, the previously active tool will again be active.	
Mouse-Pan Camera 	Left-click and drag to move the camera in any direction. The camera's position changes, but its direction does not.	Right-click and drag to orbit instead of panning.
Mouse-Dolly Camera 	Left-click and drag up and down to move the camera forward and backward or drag left or right to rotate the camera side to side.	Right-click and drag to tilt the camera instead of dollying.

Tool	Primary Behavior (Left-Click)	Alternate Behavior (Right-Click)
Mouse-Tilt Camera 	Left-click and drag in any direction to tilt the camera, changing its view direction but not its position. You can temporarily activate Mouse-Tilt Camera by using the right mouse button while the Mouse-Orbit Camera or Mouse-Dolly Camera mode is active.	Right-click to orbit instead of tilting.
3D Center Camera on Point 	Lets you focus the camera at a particular point in the scene. This changes the camera's direction and focal point, but not its position. To use this tool, activate it and then click on any object in the scene.	N/A
3D Focus on Object 	Lets you focus on a specific object by changing the camera's position, direction, focal point, and the length of its line of sight. To use this tool, activate it and then click on an object in the scene. Alternatively, select an object in the view and click the Focus on Selected edit button.	N/A

MOVE CAMERA WITH KEYBOARD

An active camera's position can be changed using the Arrow keys on your keyboard. **Select 3D> Move Camera with Keyboard** to access the Move Camera with Keyboard modes. These modes are not available in Cross Section/Elevation views.

These modes use the Incremental Move Distance and Incremental Rotate Angle set in the active 3D view's Camera Specification dialog.

- **Keyboard-Orbit Camera** lets you use the keyboard to rotate the camera around the focal point. The camera's position and direction both change.
- **Keyboard-Pan Camera** lets you move the camera up, down, right, and left using the keyboard. The camera's position changes, but its direction does not.
- **Keyboard-Dolly Camera** lets you move the camera forward and back using the Up and Down Arrow keys, and rotate side to side using the Left and Right keys.
- **Keyboard-Tilt Camera** lets you use the Arrow keys to tilt the camera up, down, or side to side to change the focal point. The camera's direction changes, but its position does not.

MOVE CAMERA TOOLS



Select **3D> Move Camera** in a 3D view to access these tools. These tools change the active camera's position but not its direction, and are not available in Cross Section/Elevation views.

These tools use the Incremental Move Distance set in the active 3D view's Camera Specification dialog.

	Description
	Move Camera Forward moves the camera and its focal point forward.
	Move Camera Back moves the camera and the focal point back.
	Move Camera Left moves the camera and the focal point to the left in a line perpendicular to the line of sight.
	Move Camera Right moves the camera and the focal point to the right in a line perpendicular to the line of sight.
	Move Camera Up moves the camera and the focal point up.
	Move Camera Down moves the camera and the focal point down.

ORBIT CAMERA TOOLS



Select **3D> Orbit Camera** in a 3D view to access these tools. Orbiting the camera rotates it about the focal point using the Incremental Rotate Angle set in the active view's Camera Specification dialog.

These tools are not available in Cross Section/Elevation, Elevation Defaults views.

	Description
	Move Camera In moves the camera closer to the focal point along the line of sight. The camera cannot move past the focal point using this tool.
	Move Camera Out moves the camera away from the focal point along the line of sight.
	Orbit Camera Upward rotates the camera up about the focal point. The camera cannot rotate past a vertical line looking straight down on the focal point.
	Orbit Camera Downward rotates the camera down about the focal point. The camera cannot rotate past a vertical line looking straight up at the focal point.
	Orbit Camera Left rotates the camera to the left about the focal point.
	Orbit Camera Right rotates the camera to the right about the focal point.

TILT CAMERA TOOLS



Select **3D> Tilt Camera** to access these tools. Tilting keeps the camera in one place and pivots the camera about its vertical or horizontal axis. This movement uses the Incremental Rotate Angle set in the active view's Camera Specification dialog and is similar to tilting your head up and down or turning it side-to-side.

These tools are not available in Cross Section/Elevation views.

	Description
	Tilt Camera Upward tilts the camera up while keeping it in the same location. The camera cannot tilt beyond the vertical position.
	Tilt Camera Downward tilts the camera down while keeping it in the same location. The camera cannot tilt beyond the vertical position.
	Turn Camera Left turns the camera to the left while staying in the same location.
	Turn Camera Right turns the camera to the right while staying in the same location.

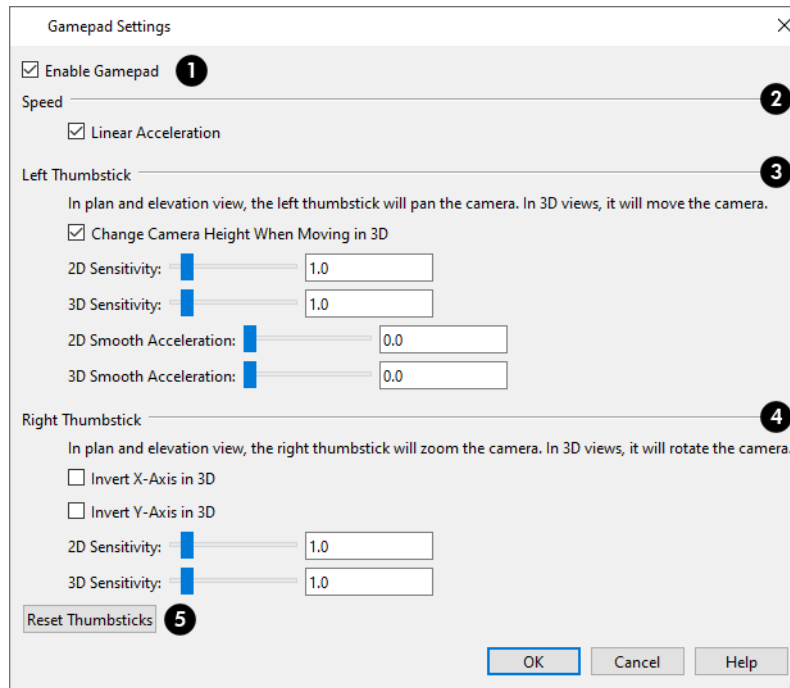
VIEW DIRECTION TOOLS

-  The View Direction Tools allow you to view the model from a specific direction in a camera view or overview. While one of these views is active, select **3D> View Direction** to access these tools.

	Description
	Front View creates a front view of the model.
	Back View creates a back view of the model.
	Top View creates a top view of the model.
	Bottom View creates a bottom view of the model.
	Left Side View create a left side view of the model.
	Right Side View create a right side view of the model.
	Restore Original View restores the original view position. This option is also available for material previews in the Library Browser and Define Material dialogs.

Gamepad Settings Dialog

-  The Gamepad Settings dialog allows you to specify thumbstick behavior in Chief Architect. Select **Tools> Customize Gamepad** to open this dialog. See [Gamepads on page 68](#).



1 Enable Gamepad

Check this box to allow Chief Architect to recognize a gamepad on your system and enable the other settings in this dialog.

2 Speed

When **Linear Acceleration** is checked, camera acceleration is always directly proportional to the amount the thumbstick is pushed. When unchecked, acceleration is increased on a curve, allowing more precision on the low end, and more speed on the high end.

3 Left Thumbstick

- When **Change Camera Height When Moving in 3D**, the left thumbstick can be used to change the camera height in 3D. Uncheck this to maintain a consistent camera height instead.
- Use the slider bar or text field to specify the **2D Sensitivity**, which controls how quickly the view pans in plan and elevation views.
- Use the slider bar or text field to specify the **3D Sensitivity**, which controls how quickly the camera moves in 3D views.
- Use the slider bar or text field to specify the **2D Smooth Acceleration**, which controls how the speed at which acceleration and deceleration occur in 2D views.
- Use the slider bar or text field to specify the **3D Smooth Acceleration**, which controls the speed at which acceleration and deceleration occur in 3D views.

4 Right Thumbstick

- When **Invert X-Axis in 3D** is unchecked, pushing the right thumbstick to the left rotates the camera to the left. When checked, pushing this thumbstick to the left rotates the camera to the right.

- When **Invert Y-Axis in 3D** is unchecked, pushing the right thumbstick to the up rotates the camera upward. When checked, pushing the thumbstick up rotates the camera downward.
- Use the slider bar or text field to specify the **2D Sensitivity**, which controls how quickly the view zooms in plan and elevation views.
- Use the slider bar or text field to specify the **3D Sensitivity**, which controls how quickly the camera rotates in 3D views.

5 Reset Thumbsticks

Click this button to restore the default Left and Right Thumbsticks settings.

Editing 3D Views

In addition to its position and direction, there are other ways to modify a 3D view.

If you make changes to an open camera view that was saved previously, you will be prompted to resave the view when you close it.

IN THE SPECIFICATION DIALOG

 You can make adjustments to a camera in its specification dialog. This dialog is particularly helpful for making fine adjustments to the camera's position, appearance, and other attributes. See [Camera Specification Dialogs on page 81](#) and [Cross Section/Elevation Specification Dialogs on page 84](#).

 Tile a 3D view and plan view and use the camera movement tools to see how they affect the camera. See [Tiling Views on page 30](#).

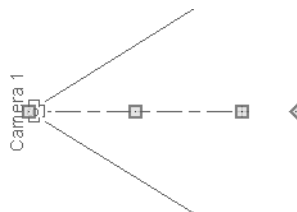
USING THE EDIT TOOLS

A camera symbol or symbols selected in plan view can be edited in a variety of ways using the buttons on the Edit Toolbar.

USING THE EDIT HANDLES

Return to plan view without closing the 3D view. See [Working in Multiple Views on page 29](#).

Using the **Select Objects**  tool, select the camera object. When a camera symbol is selected, it displays four edit handles.



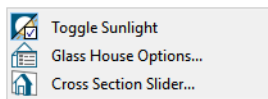
- Drag the **Line of Sight** handle to change the camera angle without moving the focal point.
- Drag the **Move** handle to relocate the camera while maintaining its relative angle.
- Drag the **Focal Point** handle to reposition the focal point and change the line of sight without moving the camera.
- Drag the **Rotate** handle to rotate the camera's line of sight about its center.

The 3D view corresponding to the camera symbol reflects changes made to the symbol in plan view.

Multiple camera symbols can be selected; however, their editing options are limited to being moved, rotated, and deleted.

USING THE CONTEXTUAL MENU

In a 3D view, right-click in an empty space in which the backdrop or background color displays to access the contextual menu. See [Contextual Menus on page 10](#).



- In Vector Views, the options are a selection of commonly used commands from the File, Edit, Tools and Window menus.
- In the other Rendering Techniques, the options are a selection of tools and toggles specific to the current view.

UP ONE FLOOR/DOWN ONE FLOOR

  You can move a camera to a different floor. While the camera view is active, select **Tools> Floor/Reference Display> Up One Floor** or **Down One Floor**. Note that this may affect what is seen in the view as well as its display in plan view. See [In Plan View on page 65](#).

The position and movement of a camera is affected by its location within the model. When the camera is outside a building, its height is relative to the terrain and follows the terrain as it is moved. When inside a building, the camera height is relative to the floor of the room it is drawn in.

If the camera is on an upper floor and you move the camera outside the building, the camera remains at the same height relative to the floor it was created on.

ZOOMING

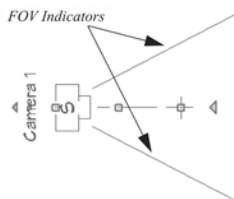
 The Zoom Tools are available in all 3D views. See [Zoom Tools on page 31](#).

Selecting **Window> Zoom In** , **Zoom Out**  or **Fill Window**  does not change the camera's location or field of view. Instead, the extents of the view are expanded or cropped.

FIELD OF VIEW

The Field of View refers to a camera's field of vision. A wider field of view makes the focal point appear further away, as more of the image is included in the same view window.

In plan view, the angled lines of a camera symbol indicate its field of view.



A camera's field of view can be adjusted in the Camera Specification dialog. See [Camera Specification Dialogs on page 81](#).

RESET SAVED CAMERA

If you open a saved camera, overview, or cross section/elevation view and then change the position, direction, or any other attribute of the view, you will be prompted to either restore the original attributes or save the current settings when you close the view. See [Saving 3D Views on page 80](#).

You can also restore its original attributes at any time prior to closing the view using the Reset Saved Camera tools. Select **3D> Camera View Options** to access these tools.



Reset Saved Camera (All) resets all changes made to the attributes of the current view.

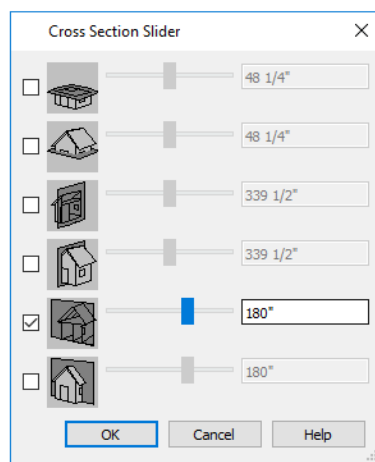


Reset Saved Camera (Position) resets changes to the camera's position and orientation but leaves other attributes as they are.

Cross Section Slider



Select **3D> Camera View Options> Cross Section Slider** when a camera view or overview is active to open the Cross Section Slider dialog.



To use the Cross Section Slider

1. Check the box beside a cross section cutting plane to select it and make its Position slider and text box active.
2. Move the Position slider to adjust the position of the cutting plane.
 - The cutting plane Position is measured from the edge of the model that is cut first by the selected cutting plane.
 - Position the Cutting Plane with accuracy using the text field to the right of the slider.
3. Repeat steps 1-3 to use additional cutting planes if you wish.
4. Click **OK** to close the dialog.

Virtual Reality



The Virtual Reality option is available in the Windows version of Chief Architect and allows you to view a plan in 3D using a VR headset. To view a model in VR, select **3D> Virtual Reality** while a Perspective camera view or

overview is active.

SYSTEM REQUIREMENTS

The following virtual reality headset models are supported for use in Chief Architect:

- Oculus: Rift, Rift S, Quest (using Link Cable), Quest 2 (using Link Cable)
- HTC: Vive, Vive Pro, Vive Pro 2, Vive Cosmos, Vive Cosmos Elite, Vive XR Elite with a Vive Streaming Cable
- Valve Index
- Microsoft Mixed Reality

In order to run Virtual Reality in Chief Architect, your computer should meet not only the program's system requirements but also the system recommendations provided by your VR headset manufacturer.

In addition, you must first install Steam, a game and software distribution program available at store.steampowered.com.

Once it has been installed, you must also run the SteamVR Setup so that your headset runs through the Steam software. The setup will walk you through setting up the VR sensors in a clear area, free from obstructions, where you can walk and move around.

Virtual Reality can only be activated while viewing an active Perspective View using either the Standard or Physically Based Rendering Technique. If Hand Drawn Lines on Top or GPU Ray Tracing is in use in the current view, it will be ignored in VR. See *Rendering Techniques on page 89*.

SAFETY CONSIDERATIONS

Virtual Reality should only be run in a space free of obstructions that could cause injury.

To avoid slow performance that could result in motion sickness, turn off any other CPU and GPU intensive applications on your system before launching Virtual Reality. Particularly if your system has a high resolution display, use FSR in the current camera view to improve performance prior to launching Virtual Reality. You can also use FSR on systems with a regular monitor; however, you may notice decreased rendering quality. See *AMD FidelityFX on page 87*.

In addition, these settings are recommended in the current camera view prior to launching Virtual Reality:

- Turn Reflections off.
- Turn on a minimal number of lights and shadows.

See *Camera Specification Dialogs on page 81*.

Just like in a Chief Architect camera view, it is possible to navigate through objects in the model when in Virtual Reality, like walls and furniture. To avoid disorientation or motion sickness, you should avoid doing so.

To avoid motion sickness while using virtual reality, gamepad style controllers are not supported. You can, however, walk within the area designated during your Steam VR Setup. To navigate to different locations in the model, you can also teleport as well as switch between Room View and Overview modes.

ROOM VIEW AND OVERVIEW MODES

Chief Architect has two Virtual Reality modes:

- In a Room View, you can navigate a model by looking around, walking, and teleporting. Room View is active when you enter VR from a Perspective Camera view.

- In an Overview you can move and rotate the model in order to examine its exterior. Overview mode is active when you enter VR from a Perspective Overview.

Note: For best results, use the Full Camera tool for Room Views rather than Floor Camera. See [3D View Tools on page 61](#).

In both modes, your initial position and orientation in Virtual Reality are based on the position and angle of the camera. As you turn your head or walk, the view seen in the VR headset will update to reflect your movements. The original camera in Chief Architect will be unaffected, however.

Once you enter Virtual Reality, you can switch between the two modes:

- To transition from Room View to Overview, point either VR controller straight up until the Teleport Line changes to a short gray line. Press and hold the Transition button on your VR controller until the line changes entirely to the Mode Transition Color and the controller vibrates, then release the button. See [Virtual Reality Dialog on page 78](#), below.
- To transition from Overview to Room View, point either VR controller toward a valid surface on the model. Press and hold the Transition button until the line changes entirely to the Mode Transition Color and the controller vibrates, then release the button.

NAVIGATING ROOM VIEWS

In a Room View, you can explore a model by looking around, walking in your predefined VR space, and teleporting.

To teleport to other locations within the model, press and hold the Trigger on your VR controller while aiming at a suitably flat surface. A Teleport Marker will appear at the location that you point at, and releasing the Trigger will teleport you to that location.

In Room View, the VR controller projects a Teleport Line that indicates whether a targeted surface is a valid location to teleport to. A valid surface is defined as any surface that has less than 45° pitch, however if a valid surface exists less than 12” below an invalid target location, it will show as valid and the teleport marker will be placed next to the targeted surface. This allows you to easily teleport next to an otherwise invalid surface, such as a wall or cabinet.

To cancel a teleport action, aim the Teleport Line at an invalid location. When the line changes color and the Teleport Marker disappears, release the Trigger.

In Room View, a number of navigation actions can be completed using your VR controller. These controls are the same on both right and left controllers, but specific functions differ slightly depending on the VR controller used.

Command	HTC Vive/Microsoft	Oculus Rift
Teleport	Trigger	
Undo	Trackpad Left	Thumbstick Left + Click
Redo	Trackpad Right	Thumbstick Right + Click
Reset	Menu Button	Thumbstick Up + Click
Transition	Trackpad Down	X or A Button
Update Lighting	Trackpad Upper Click	Y or B Button

NAVIGATING OVERVIEWS

In Overview mode, you can examine and model by moving and rotating it in front of you as if holding a scaled version of the model.

In this mode, the Grip buttons on your VR controller allow you to “grab” and rotate the model. Using the Grip buttons on both VR controllers simultaneously gives a more natural rotation, as if grabbing and rotating the entire model.

Pressing and holding the Trigger allows you to drag the model in any direction: up, down, left, right, towards you, and away from you.

Pressing the Triggers while holding the Grips on both controllers simultaneously allows you to zoom in and out. Moving your hands apart will zoom in to the model, moving them closer together will zoom out.

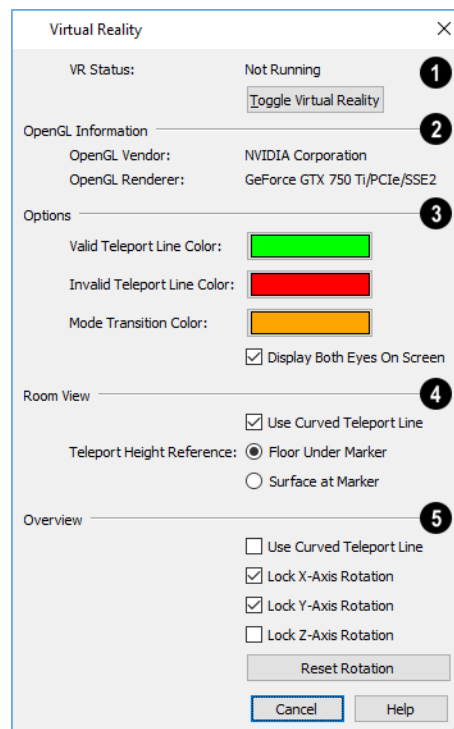
In Overview mode, a number of actions can be completed using your VR controller. These controls are the same on both right and left controllers, but specific functions differ slightly depending on the VR controller used.

Command	HTC Vive/Microsoft	Oculus Rift
Rotate	Grip	
Drag	Trigger	
Zoom	Grip + Trigger	
Undo	Trackpad Left	Thumbstick Left + Click
Redo	Trackpad Right	Thumbstick Right + Click
Reset	Menu Button	Thumbstick Click
Transition	Trackpad Down	X or A Button
Update Lighting	Trackpad Upper Click	

VIRTUAL REALITY DIALOG

To view a model in VR, select **3D> Virtual Reality**  while a Perspective Camera view or Overview is active. The Virtual Reality dialog will open.

Note: Neither Hand Drawn Lines on Top nor GPU Ray Tracing are supported in VR.



1 VR Status

The current **Virtual Reality Status** is stated at the top of the dialog, along with information about graphics card or chipset being used on the computer.

- Click the **Toggle Virtual Reality** button to turn Virtual Reality on or off.

2 OpenGL Information

Information about your graphics card is displayed here for reference. Visit chiefarchitect.com for information about system requirements.

3 Options

- Validity of a surface is indicated by the color of the teleport line. The **Valid Teleport Line** and **Invalid Teleport Line Colors** can be set here.
- The teleport line will display the **Mode Transition Color** when switching between Room View and Overview Modes. This color can also be set here.
- When Virtual Reality is active, the program window shows what the user sees in the VR headset. By default, both eyes' views are shown in a split screen. If you would prefer to see only the left eye's view, uncheck **Display Both Eyes On Screen** in the Virtual Reality dialog.
- When **Update Lighting on Teleport** is checked, the lighting in the model will update when you teleport more than 10 feet (3 m) to ensure that your destination has lighting. Uncheck this if you prefer to only update lighting manually using the controller.

4 Room View

Specify how the teleport feature works in **Room View** Mode.

- **Use Curved Teleport Line** changes the teleport line from a straight line to a curved arc. This is checked by default for Room Views.
- The **Teleport Reference Height** setting determines how the camera height is calculated when the teleport feature is used.
- When **Floor Under Marker** is selected, the new camera position will calculate its height based on the floor surface, or the floor directly beneath where the teleport marker lands if locating a raised surface such as a countertop or table. This may result in being teleported inside furniture or other objects.
- When **Surface at Marker** is selected, the new camera location will determine its height from the surface where the marker landed. This will place the camera on top of objects such as furniture and may result in the view being in or above the ceiling.

5 Overview

Specify how the teleport feature works in **Overview** Mode.

- **Use Curved Teleport Line** changes the teleport line from a straight line to a curved arc. This is unchecked by default for Overviews.
- **Lock X-Axis Rotation** prevents the model from being tilted vertically.
- **Lock Y-Axis Rotation** prevents the model from being rolled left to right.
- **Lock Z-Axis Rotation** prevents the model from being spun horizontally.

When Virtual Reality is active, neither the camera nor the model can be edited in any way. If you wish to make modifications, you must **Toggle Virtual Reality** off in the Virtual Reality dialog, make the necessary adjustments, and then enter Virtual Reality again.

Saving and Printing 3D Views

3D camera views, overviews, and cross section/elevation views can be saved with the plan in which they are created, exported and saved as image files, as well as printed.

SAVING 3D VIEWS



Select **3D> Save Active Camera** to save the current camera in the plan. You can also save a camera view by checking the **Saved** box in the Camera Specification dialog. See [Camera Specification Dialogs on page 81](#).

In addition, if Text objects are drawn in a cross section/elevation view, you will be prompted to save the view when you close it. Any Text objects added to a cross section/elevation view are saved with the view as part of the plan file.

ACTIVATING SAVED VIEWS

There are several ways to open a saved 3D view:

- Select the camera symbol in plan view and click the **Open View**  edit button.
- Right-click on the camera symbol in plan view and select **Open View**  from the contextual menu.
- Double-click the camera symbol using the **Select Objects**  tool.

Unsaved cameras that are open in another view window can also be activated using the **Open View**  edit button.

If you open a saved camera view and then modify its location or direction using any of the tools available in that view, the program will confirm whether you want to re-save the camera using these new settings when you close it. See [Navigating in Camera Views on page 67](#).

EXPORTING 3D VIEWS



All 3D views can be exported and saved as .bmp, .jpg, .png, or .tif files. Select **File> Export> Picture** to save the current screen image as an image file. See [To export a picture on page 94](#).

In addition, Vector Views can be exported and saved as .emf files. See [Metafiles on page 94](#).

Once saved, a picture can be opened and converted into many other formats using a graphics program.

PRINTING 3D VIEWS



Since all 3D views other than Vector Views are created using pixels instead of lines, **File> Print> Print Image** must be used when printing. Print Image is a special Chief Architect function that prints the screen in picture format.

CLOSING 3D VIEWS

Although you can have any number of 3D views open at a time, to conserve resources on your computer it is a good idea to close views when you no longer need them. There are a number of different ways to do this. See [Closing Views and Files on page 33](#).

Camera Specification Dialogs

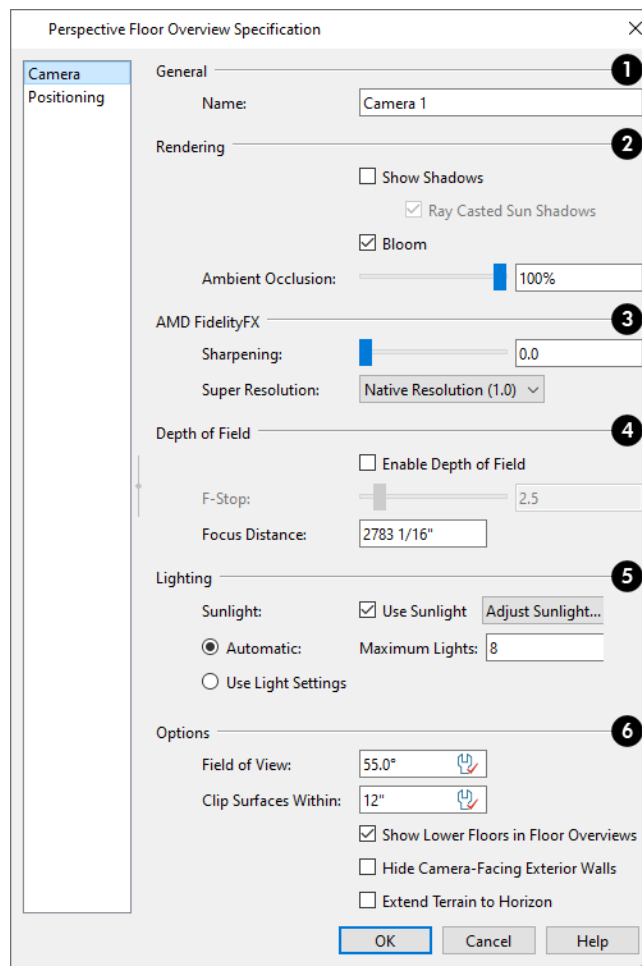
 The Camera Specification dialog can be accessed in plan view by selecting one or more camera symbols and clicking the **Open Object** edit button. See [In Plan View on page 65](#).

 This dialog can also be accessed while a camera view or overview is active by selecting **3D> Edit Active Camera**.

The settings in this dialog may vary somewhat depending on the tool used to create the selected view. This tool name is indicated in the dialog's title bar: the specification dialog for a **Full Camera** , for example, is named Full Camera

Specification. See [3D View Tools on page 61](#).

The settings in this dialog are also found in the Camera Defaults dialogs for each of the camera tools. See [Camera Defaults Dialogs on page 61](#).



1 General

- Specify a **Name** for the camera that displays in its label in plan view. Names must be unique.

2 Rendering

- Check **Show Shadows** to turn on shadows in the selected camera view. When unchecked, shadows are not generated.
- Check **Ray Casted Sun Shadows** for higher quality shadows cast by sunlight. Ray Casted Sun Shadows take longer to generate than regular shadows and only refresh when the camera is not moving.
- Check **Reflections** to turn on reflections in the selected camera view. When unchecked, reflections are not generated. See [Rendering Effects on page 87](#).
- Light **Bloom** occurs around areas of intense illumination and looks as though the light is 'bleeding' beyond the edges of the light source. It adds realism to the view but can take longer to render. Only affects Standard renderings. See [Rendering Techniques on page 89](#).
- Select the amount of **Ambient Occlusion** in the view using the slider bar or text field. Ambient Occlusion allows variation in the strength of the ambient light in Standard renderings. It is more realistic than uniform ambient light, but can take longer to render.

3 AMD FidelityFX

These settings allow you to improve rendering performance on systems with high resolution monitors. These options are not used in line-based Rendering Techniques. See [AMD FidelityFX on page 87](#).

- Specify the level of **Sharpening**, which affects how sharp or soft textures appear in the current view.
- **Super Resolution** refers to a technique that renders at a lower-than-native resolution and then upscales the result. On high resolution displays, these options improve performance without noticeably affecting quality.
- The scaling factor used by each option is listed after its name: the higher the factor, the greater potential for both performance improvement and reduced quality.
- Only "Native Resolution" is recommended on regular resolution monitors, as noticeable quality loss may occur otherwise.

4 Depth of Field

These settings allow you to add blur to objects that are not in focus in the current Standard, Vector View, or Glass House rendering.

- Check **Depth of Field Enabled** to enable the settings below and add blur to out-of-focus objects.
- Set the **F-Stop** using the scroll bar or text field. A low value increases blur while a high value reduces blur.
- Specify the **Focus Distance**, which is the distance from the camera at which objects are in focus and no blur occurs. Objects closer to the camera than this distance are subject to blur, as are those further away from the camera.

5 Lighting

These settings control which and how many light sources are used in the current view. See [Lighting Modes on page 87](#).

- When **Use Sunlight** is checked, the sun light source is on in the current view. Uncheck this box to toggle sunlight off.
- Click the **Adjust Sunlight** button to open the Adjust Sunlight dialog. Not available in the Camera Defaults dialogs. See [Adjust Sunlight Dialog on page 88](#).

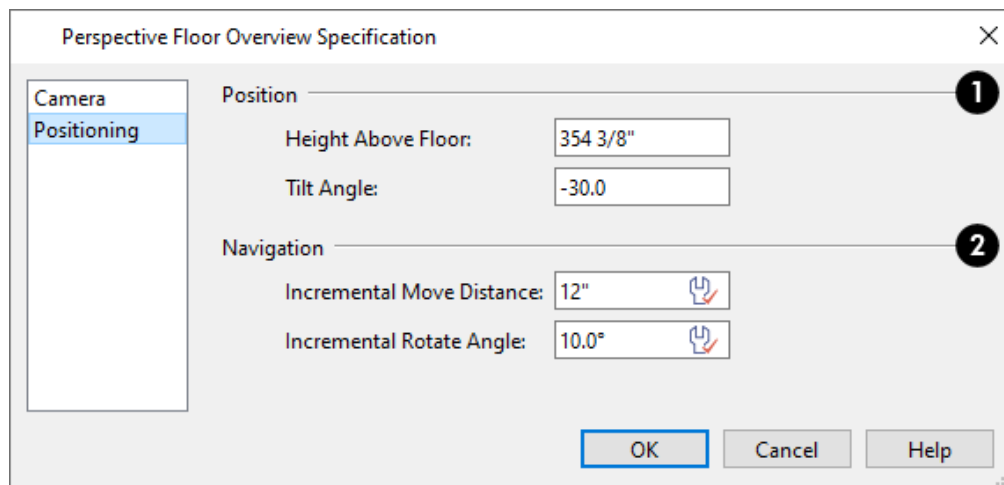
- Select **Automatic**, then specify the **Maximum Number** of lights that can be used in the current camera view.
- Select **Use Light Settings** to use all light sources in the entire plan.

6 Options

- The **Field of View** defines the camera's field of vision in angular degrees. See [Field of View on page 74](#).
- **Clip Surfaces Within** - Objects located within this distance from the camera do not display in the view. Decrease this value to display objects located close to the camera; increase it to improve the appearance of some surfaces in Overview cameras with very large extents.
- Uncheck **Show Lower Floors** to show only the current floor in the selected Floor Overview. When checked, the current floor plus any floors beneath it are included in the view. Only available for Floor Overviews. See [Floor Overview on page 63](#).
- Check **Hide Camera-Facing Exterior Walls** to suppress the display of any exterior walls that face the camera. Interior walls set as Attic walls are also suppressed. This setting only has an effect when the selected camera's position is on the exterior of a structure and also has an associated toggle. Not recommended in GPU Ray Traced views. See [Hide Camera-Facing Exterior Walls on page 87](#).
- Check **Extend Terrain to Horizon** to create a virtual extension of the Terrain Perimeter in camera views that appears to extend to the horizon. This setting only has an effect if a Terrain Perimeter is present.

POSITIONING PANEL

Only the X and Y Position settings are available in the Cross Section/Elevation Specification dialog. See [Cross Section/Elevation Specification Dialogs on page 84](#).



1 Position

These settings determine the position and orientation of the camera. Only the Height Above Floor and Tilt Angle are available in the Camera Defaults dialogs. See [Navigating in Camera Views on page 67](#).

- The **Height Above Floor** defines the height that the camera is above the floor level for the current floor. See [Camera Height on page 63](#).

- The **Tilt Angle** determines the vertical angle that the camera is tilted. The camera maintains its focal point and position in plan view, but if the camera is tilted, the focal point is above or below the current camera height.

2 Navigation

These settings control how the camera is affected when you navigate using the mouse. See [Move Camera with Mouse on page 68](#).

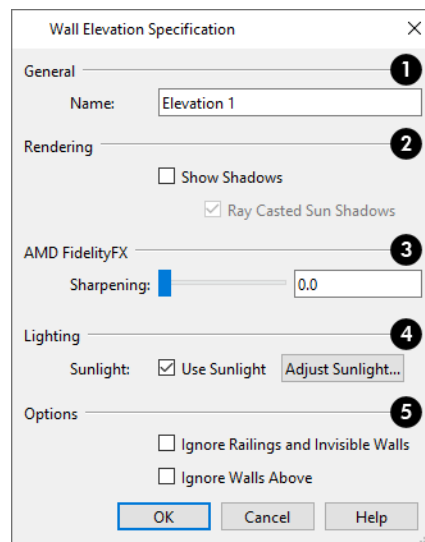
- The **Incremental Move Distance** controls how far the camera moves each time you Pan in any direction or Dolly forwards or backward using the keyboard, toolbar buttons, or menu. For interior views a small number is good, but for exterior you may want a larger increment.
- The **Incremental Rotate Angle** defines how many degrees the camera rotates each time you Tilt, Orbit, or Dolly side to side using the keyboard, toolbar buttons, or menu. A setting of 90° would make one full rotation in four moves.

Cross Section/Elevation Specification Dialogs

The Cross Section/Elevation Specification dialogs can be accessed in plan view by selecting one or more cross section/elevation camera symbols and clicking the **Open Object** edit button. When a Wall Elevation camera is selected, the similar Wall Elevation Specification dialog opens instead. See [In Plan View on page 65](#).

This dialog can also be accessed while a cross section/elevation camera view is active by selecting **3D> Edit Active Camera**.

Most of the settings in this dialog are also found in the Cross Section/Elevation Defaults dialog. See [Camera Defaults Dialogs on page 61](#).



1 General

- Specify a **Name** for the camera that displays in its label in plan view. Names must be unique.

2 Rendering

- Check **Show Shadows** to turn on shadows in the selected camera view. When unchecked, shadows are not generated. See *Shadows on page 87*.
- Check **Ray Casted Sun Shadows** for higher quality shadows cast by sun light. Ray Casted Sun Shadows take longer to generate than regular shadows and only refresh when the camera is not moving.

3 AMD FidelityFX

See *AMD FidelityFX on page 87*.

- Specify the level of **Sharpening**, which affects how sharp or soft textures appear in the current view. In cross section/elevation views, this option only affects views using the Standard Rendering Technique. See *Rendering Techniques on page 89*.

4 Lighting

- When **Use Sunlight** is checked, the sun light source is on in the current view. Uncheck this box to toggle sunlight off.
- Click the **Adjust Sunlight** button to open the Adjust Sunlight dialog. Not available in the Camera Defaults dialogs.

5 Options

- These settings are only available for Wall Elevation views.
- Check **Ignore Railings and Invisible Walls** to ignore the room definition created by these types of walls in a selected view. When this is unchecked, only room definition created by regular walls is recognized.
- Check **Ignore Walls Above** to prevent any walls located above the selected camera's room from displaying in the view. This option typically has an effect only when the camera's room has Flat Ceiling Over This Room unchecked, or the room above has Floor Under This Room unchecked, in the Room Specification dialog.

3D Rendering

Chapter 8

There are a variety of tools available to create 3D views of a model: simply click a button to create an overview, or click and drag to create a camera or cross section/elevation view. See [3D Views on page 60](#).

TOPICS

Rendering Effects	87
Lighting Modes	87
Adjust Sunlight Dialog	88
Rendering Techniques	89
Rendering Technique Options	90

Rendering Effects

There are a variety of factors which affect the appearance and quality of rendered 3D views. These options may also affect program performance.

AMD FIDELITYFX

In some cases, rendering large and complex scenes can be time-consuming. On systems with high resolution monitors (ex. 4k or Retina), you can reduce rendering time without noticeably impacting quality using the AMD FidelityFX settings.

FidelityFX Super Resolution, also referred to as FSR, is a technique that renders scenes at a lower-than-native resolution to shorten rendering time and then scales the result up again. On regular, lower resolution monitors this typically results in decreased quality; however, on high resolution displays the change in quality is considerably less pronounced.

FSR can be specified in camera views and overviews, but not elevation views. See [Camera Specification Dialogs on page 81](#).

FSR is only used in the Standard Rendering Technique. See [Rendering Techniques on page 89](#).

SHADOWS



Shadows have an important effect on image quality.

Shadows are enabled in Full Camera views by default. You can, however, check or uncheck **Show Shadows** in the defaults dialog for any camera tool or in the. In addition, you can select **3D> Camera View Options> Toggle Shadows**  in any camera view. See [Camera Specification Dialogs on page 81](#).

HIDE CAMERA-FACING EXTERIOR WALLS



Occasionally, it can be very helpful to view the interior of a structure from an exterior view. To achieve this, create an exterior camera view or overview and select **3D> Camera View Options> Hide Camera-Facing Exterior Walls**. This option is view-specific and can also be set in the Camera Specification dialog. See [Camera Specification Dialogs on page 81](#).

Lighting Modes

By default, cameras use an Automatic Lighting Mode that allows a set number of lights to illuminate the view. This number can be specified in the Camera Specification dialog. See [Camera Specification Dialogs on page 81](#).

If more than the set number of lights are present, lights are prioritized in this order:

- Lights in the same room as the camera before those in different rooms.
- Higher intensity lights before lower intensity lights.
- Lights closer to the camera before those further away.

Regardless of their intensity or proximity to the camera:

- Interior lights are not used in exterior camera views.
- Exterior lights are not used in exterior camera views when the Sunlight is toggled on.
- Lights on floors above the camera are not used in Floor Overviews. See [3D View Tools on page 61](#).

The Automatic Lighting Mode is useful because it is an easy way to produce reasonable lighting without taxing your video memory.

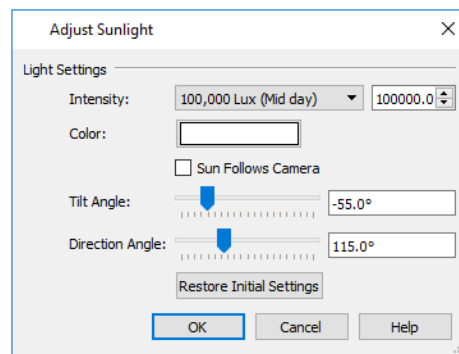
An alternative to the Automatic Lighting Mode is the **Use Light Settings** option. When **Use Light Settings** is selected, all lights in the current plan that are turned On are used in 3D views. This gives you control over which lights are used as light sources but may require more resources on your system.

Adjust Sunlight Dialog



The Adjust Sunlight dialog allows you to control the intensity, direction and color of the Generic Sun light source in the currently active 3D view.

To open this dialog, click the Adjust Sunlight button in the Camera Specification dialog. See [Camera Specification Dialogs on page 81](#).



- Use the **Intensity** slider bar or text field to control the brightness of the Generic Sun's light. This setting is not applied in views using the Generated Sky. See [Rendering Effects on page 87](#).
- Click the **Color** bar to define the color of the light being modeled. Colored sunlight may be used to achieve special lighting effects, but may alter the appearance of your material colors and textures. The color selected here is not used in views using the Generated Sky.
- Check **Sun Follows Camera** to adjust the position of the Generic Sun so that it is always behind the camera, illuminating surfaces in the view. When this is checked, the Tilt and Direction Angle settings that follow are disabled. This option must be unchecked in order to use the Move Sun and Move Moon tools.
- Specify the **Tilt Angle**, which is the angle of the sunlight with respect to the horizon. A value of 90° means that the light points straight up, while a value of -90° means that the light points straight down. 0° is parallel to the horizon.
- Specify the **Direction Angle**, which is the direction that the sunlight points toward. 0° is measured horizontally on screen, pointing to the right. Positive values rotate in a counter-clockwise direction from there, while negative values rotate clockwise.
- Click the **Restore Initial Settings** button to restore the original Generic Sun settings.

By default, the Generic Sun light color is pure white, which has the least effect on the appearance of material colors and textures.

Rendering Techniques

 Any camera view, cross section/elevation view, or overview can be generated using one of several Rendering Techniques to produce views for a range of different purposes. To access these tools, while a 3D view is active, select **3D> Rendering Techniques**, then select one of the following techniques:

 The Watercolor technique requires more time to generate than other Rendering Techniques. To save time, adjust the camera's perspective before using one of these techniques. See [Editing 3D Views on page 73](#).

STANDARD RENDERING

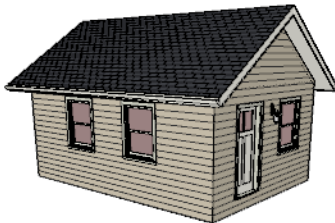
 Standard rendering is a photo-realistic technique that represents materials using textures, models lighting and shadows, and can also display reflections. Surface edge lines are not drawn and no special colors or effects are applied.



In plan view, the camera symbol for a view using the Standard technique displays an S in its center. See [Displaying 3D Views on page 65](#).

VECTOR VIEW

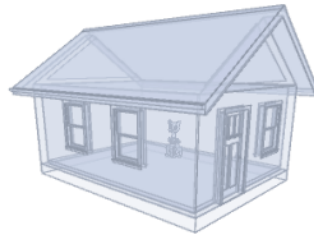
 In Vector Views, surface edge lines are drawn and pattern lines and colors are used to represent materials while textures are not. Shadows are supported, and when in use a single light source is used to produce them. Shading Contrast can be applied to surfaces, but other special colors or effects are not.



In plan view, the camera symbol for a view using the Vector View technique displays a V in its center.

GLASS HOUSE

 Glass House rendering uses different shades of a single color to display the model with surface edge lines and semi-transparent surfaces. Lighting and shadows are not modeled, and materials are not represented, so neither pattern lines nor textures are used.



In plan view, the camera symbol for a view using the Glass House technique displays a G in its center.

Rendering Technique Options



The settings in the Rendering Technique Options dialog allow you to control the specific effects of each rendering technique on an active 3D view. To access this dialog, create a camera view, elevation view, or overview and select **3D> Rendering Techniques> Technique Options**.

In the Rendering Technique Options dialog, select a technique from the list on the left to make its options active on the right. When this dialog is first opened, the technique currently used by the view is selected.

As changes are made in the Rendering Technique Options dialog, the 3D view automatically updates to reflect those changes.

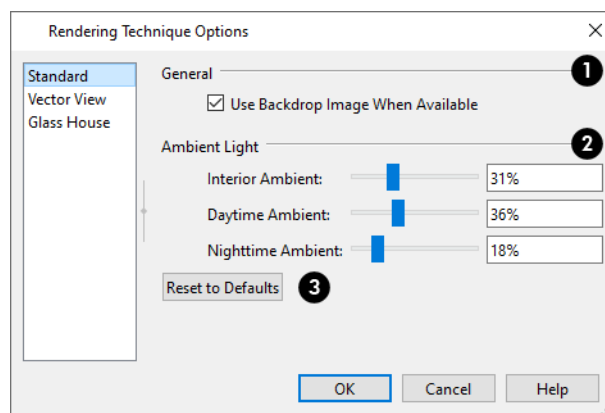
The Rendering Technique Options dialog has the following panels:

STANDARD PANEL



The active 3D view immediately updates to reflect any changes made to the Rendering Technique Options for Standard renderings.

There are a variety of other tools that affect the appearance of Standard rendered views, as well. See [Displaying 3D Views on page 65](#).



1 General

- When **Use Backdrop Image When Available** is checked, the backdrop image specified for this view is used. When unchecked or if no backdrop image is specified for the current view, a solid color is used instead.

2 Ambient Light

Specify the amount of Ambient light to use in different situations in Standard renderings.

- **Interior Ambient** affects interior views.
- **Daytime Ambient** affects exterior views.
- **Nighttime Ambient** affects nighttime exterior views.

3 Reset

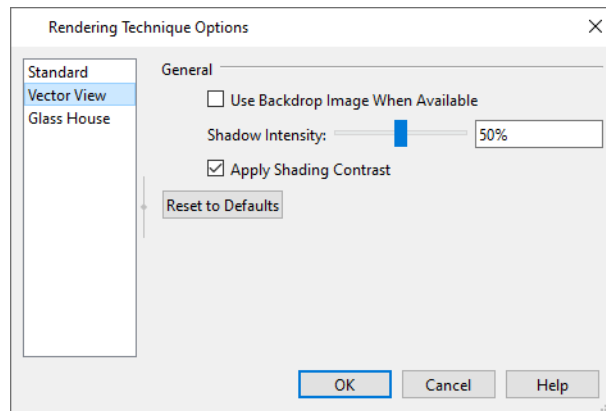
- Click **Reset to Defaults** to restore the default settings used when the Standard technique was first enabled.

VECTOR VIEW PANEL



The active 3D view immediately updates to reflect any changes made to the Rendering Technique Options for Vector Views.

There are a variety of other tools that affect the appearance of Vector Views. See [Displaying 3D Views on page 65](#).

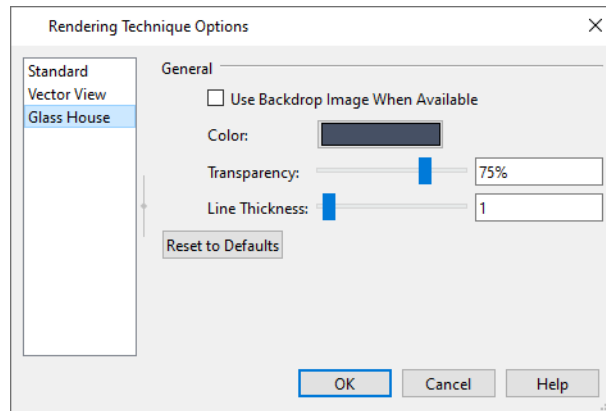


- Check **Use Backdrop Image When Available** to use the backdrop image specified for this view. When unchecked or if no backdrop image is specified for the current view, a solid color is used instead.
- Specify the **Shadow Intensity**, which is how dark or light shadows appear. A value of 100% creates shadows that hide any objects located within them; a value of 0% effectively produces no shadows.
- When **Apply Shading Contrast** is checked, different levels of shading is used on surfaces oriented at different angles in the model. Uncheck this box to use unmodified material Colors on all surfaces, regardless of the angle.
- Click **Reset to Defaults** to restore the default settings used when the Vector View technique was first enabled.

GLASS HOUSE PANEL



The active 3D view immediately updates to reflect any changes made to the Rendering Technique Options settings for Glass House renderings.



- When **Use Backdrop Image When Available** is checked, the backdrop image specified for this view is used. When unchecked or if no backdrop image is specified for the current view, a solid color is used instead.
- Click the **Color** bar to select a color for the semi-transparent surfaces and lines in a Glass House view. See [Select Color Dialog on page 38](#).
- Specify the **Transparency** of the surfaces in Glass House view. For example, to create a wireframe line drawing of your structure, turn transparency to full and minimize line thickness.
- Specify the **Line Thickness** of surface lines in Glass House view.
- Click **Reset to Defaults** to restore the default settings used when the Glass House technique was first enabled.

Pictures and Metafiles

Chapter 9

Chief Architect uses picture files in a variety of ways to enhance your drawings.

You can save any 2D or 3D view using a variety of picture file formats that can be opened in other applications.

In addition, if your design professional provided you with one, you can view a 3D walkthrough, which is a video tour of a model.

TOPICS

Exporting Pictures	94
Metafiles	94

Exporting Pictures

There are two ways to save a picture of a view in Chief Architect Viewer:



Using the **Export Picture** tool is similar to creating a screen capture of everything in the current view window. Pictures can be saved in various file formats and used in other applications. **Export Picture** is best suited for rendered views. When exporting a line-based view, best results can be achieved by saving it as a metafile. See *To export a metafile on page 94*.



Use the **Print Image** tool to either print or save the current view as a PDF file. See *Print Image Dialog on page 101*.

To export a picture

1. Open the view that you would like to export as a picture file.
2. Zoom, pan or otherwise adjust the view so that what you see on screen suits your needs. See *Displaying 3D Views on page 65*.
3. Select **File> Export> Export Picture (BMP, JPG, PNG)**  to open the Export Picture File dialog and give the picture file a name, file type, and save location. See *Exporting Files on page 22*.

Metafiles

A metafile (**.emf**, **.wmf**) is a special picture file format made up of vectors (lines) that allow the image to be rescaled without loss of quality. High resolution pictures of line-based views can be exported as a metafile.

Note: Metafiles are not supported in Mac operating systems and cannot be exported in Mac versions of the software.

EXPORTING METAFILES

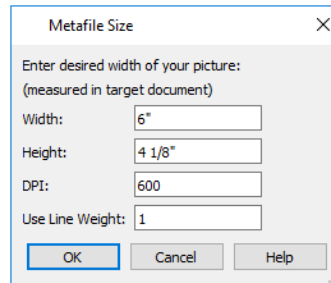


An enhanced metafile (**.emf**) can be exported from any line-based view: that is, from plan view and 3D Vector Views.

Only objects that display on screen are included in an exported metafile.

To export a metafile

1. Accurately position the view on screen.
2. Select **File> Export> Export Metafile (EMF)** .
3. Drag a marquee  from corner to corner, defining the area to be included in the metafile.
4. Release the mouse button to open the Export Metafile dialog, which is a typical Save File dialog. See *Exporting Files on page 22*.
5. When you click the Save button, the Metafile Size dialog opens.



6. Specify the desired **Width** or **Height** of the metafile. When one value is edited, the other changes to maintain its aspect ratio.

Specify, too, the desired **Dots Per Inch (DPI)** for the metafile. A larger value results in a higher quality metafile, but also a larger file size.

7. When a metafile is exported from a 3D Vector View, you can also specify the printed thickness of lines in the view. To increase the printing line weight, type a larger number in the **Use Line Weight** field. See [Vector View on page 89](#).

Metafiles exported from plan view use the line weights defined in the Layer Display Options dialog. See [Layer Display Options Dialog on page 36](#).

Printing

Chapter 10

Chief Architect Viewer provides a variety of options for printing scaled plan views, elevation views, and 3D perspectives and layout pages, allowing you to print up to 11” x 17” in size.

Chief Architect also allows you to save your drawings in **.pdf** file format that can then be sent to a printing service.

Note: Screen captures are provided for illustrative purposes only and are not an endorsement of any products.

TOPICS

The Printing Tools	97
Print Preview	97
Printing Across Multiple Pages	97
Printing to a PDF File	98
Print View Dialog	98
Print Image Dialog	101

The Printing Tools



Select **File> Print** to view the Print Tools submenu.



Print Preview - Shows on screen how the current view will appear printed, based on the current scale and other settings. See [Print Preview on page 97](#).



Print - Prints the current plan view, Vector View, or layout sheet to a specified scale. See [Print View Dialog on page 98](#).



Print Image - Prints the current view including images, textures, and backdrop. Views printed with Print Image are not scaled. See [Print Image Dialog on page 101](#).



You can also select **File> Export> Export PDF** to open the Export PDF dialog. See [Print View Dialog on page 98](#).



Clear Printer Info - Some information specific to individual printers, such as available paper sizes, is saved with each file. This clears the printer-specific information associated with the current page setup.

Print Preview

Print Preview and its related display toggles allow you to get a sense of what the current view will look like when it is printed.

PRINT PREVIEW



Select **File> Print> Print Preview** for an on-screen representation of how the current view will appear when printed. Print Preview is only available in views that can be scaled.

Objects such as camera symbols, text and dimension objects appear on-screen as they will on the printed page.

When **Print Preview** is enabled, color will display depending on whether **Print in Color** is selected in the Print View dialog. See [Print View Dialog on page 98](#).

The Reference Display does print if it is visible. See [The Reference Display on page 58](#).

COLOR



The **Color** toggle turns the on-screen display of color on or off in all views.

Printing Across Multiple Pages

When printing directly from a plan view, cross section/elevation view, or layout it is possible to print at a scale that does not fit the drawing on one page.

To see on-screen what the drawing will look like when printed, select **File> Print> Print Preview** and then **Window> Fill Window** . Grey lines across the drawing sheet indicate where the page breaks will occur. See [Print Preview on page 97](#).

To print across multiple pages

1. Select **File> Print> Print Preview**  to display the white rectangle representing the printer paper. See [Print Preview on page 97](#).
2. Click the **Select Objects**  button, then click near an edge of the printer paper rectangle to select it.
When selected, the printer paper is highlighted in pale grey and a square Move edit handle displays at its center.
3. Click and drag the Move edit handle to position the printer paper so that the portion of your drawing that you would like to print on your first page is located within the printable area of the page.
4. Select **File> Print> Print** . In the Print dialog, make sure **To Scale** is selected, then click OK. See [Print View Dialog on page 98](#).
5. Select the printer paper rectangle and move it so that the desired contents of your second printed page are within the printable area and print **To Scale**.
6. Continue moving the printer paper and printing as needed.

When printing multiple pages, it is generally a good idea to leave some overlap on the edges of each page to make sure that information near those edges is not left off the printed pages by mistake.

Printing to a PDF File

Portable Document Format, or **.pdf** files, are one of the most universally compatible and efficient file formats and can be viewed and printed on most computer platforms.

You can save any view as a **.pdf** file by selecting “Chief Architect Save as PDF” or any other PDF writer installed on your system as the Destination printer **Name** in either the Print View or Print Image dialog. See [Print View Dialog on page 98](#) and [Print Image Dialog on page 101](#).

You can also print to **.pdf** from any view by selecting **File> Export> Export PDF** .

When you print to **.pdf**, you will be asked to create a file name and choose a destination to save it in the Save as PDF File dialog.

Print View Dialog

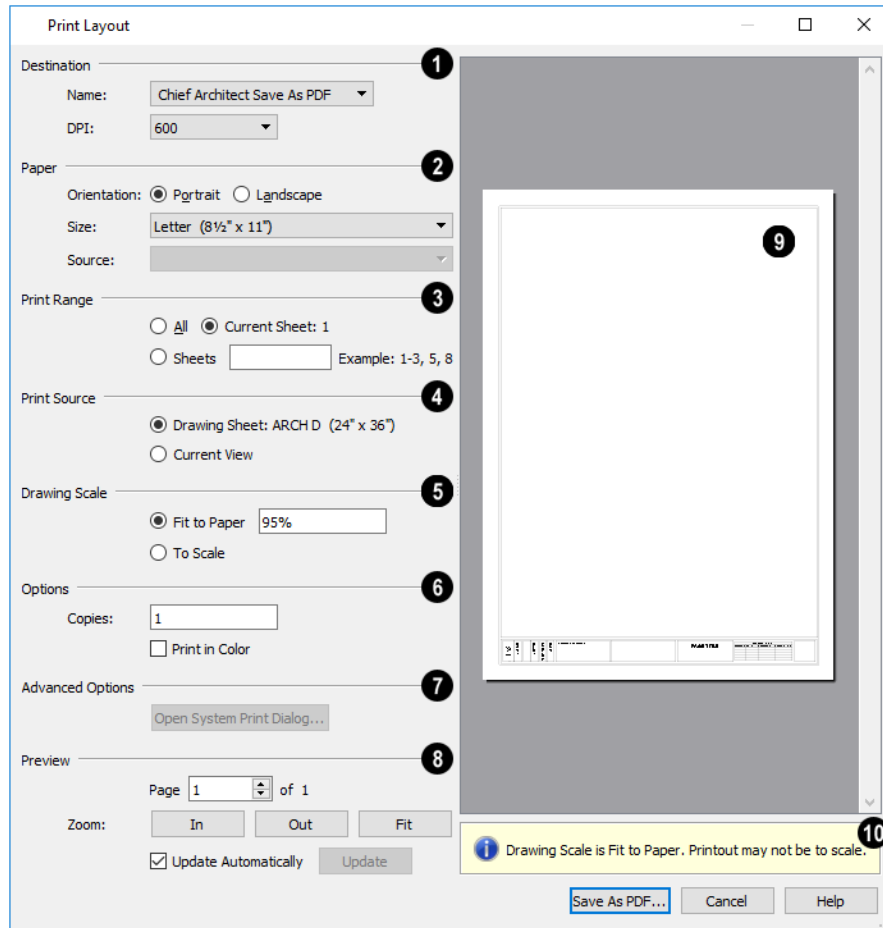


To print from plan view, 3D Vector Views, or layout, select **File> Print> Print**. The Print View or Print Layout dialog opens. The settings that are available will vary depending on which version of the dialog is open.



Select **File> Export> Export PDF** to open the similar Export PDF dialog.

Note: 3D views that are not Vector Views can be printed using Print Image. See [Print Image Dialog on page 101](#).



1 Destination

- Select the **Name** of the printer you would like to use from the drop-down list. To print to **.pdf**, select “Chief Architect Save as PDF” from the list, or choose a **.pdf** writer installed on your system. See [Printing to a PDF File on page 98](#).
- Select the **DPI**, or Dots Per Inch to use when printing, from the drop-down list. The available options may vary depending on the selected printer.

2 Paper

Select the **Paper Orientation**, **Size**, and **Source**. The available Size and Source options are controlled by the selected printer’s driver.

- When possible, the program will automatically set the Size and Orientation to match those of the Drawing Sheet.
- The Paper Size may be automatically adjusted if the Drawing Scale option is changed, below.

3 Print Range

In layout files only, specify the range of pages to print. Only pages that have views or objects drawn directly on them will print.

- Select **All** to print the entire drawing.
- Select **Current Sheet** to print only the currently active layout page.
- Select **Sheets** to specify which layout pages to print, then type the page numbers you wish to print, separated by commas or by a dash. Not available in plan files.

4 Print Source

- Select **Drawing Sheet** to print the entire sheet even though you may be zoomed in on a portion of the view. This is selected by default when the Drawing Sheet is set to display in the current view.
- Select **Current View** to print only that portion of the active view that is currently visible on screen. If you are zoomed out, any blank space outside the printable objects in the view is ignored. This is selected by default when the Drawing Sheet is not displaying in the current view.

5 Drawing Scale

Changes to these options may cause the Paper Size to change, above. Not available in camera views or overviews.

- **Fit to Paper** prints the view on one page. The program uses whatever scale is necessary to fit the plan on one page.
- When **Fit to Paper** is selected, specify the percentage of the paper to be used. The default value is 95%.

Note: The Fit to Paper percentage value is global - affecting all views in all files, and is retained between sessions.

- Select **To Scale** to print at the scale specified in the program in which the file was originally created.

6 Options

- Specify the number of **Copies** you would like to print.
- Check **Print in Color** to print in color or clear the check box to print in either grayscale or black and white.

7 Advanced Options

Click the **Open System Print Dialog** button to close the Print View dialog and print using your operating system's Print dialog instead. Not available when No Printer is selected.

8 Preview

Control the appearance of the print job preview on the right side of the dialog.

- Specify the **Page** that displays in the Preview area.
- Click the buttons to **Zoom In**, **Zoom Out**, or **Fit** the selected Page to the extents of the Preview area.
- Uncheck **Update Automatically** to turn off the print job Preview and prevent it from updating as changes are made to the settings in this dialog.
- Click the **Update** button to update the print job Preview to reflect the current settings in this dialog. If Update Automatically is unchecked, clicking Update may force the Preview to be blank.

9 Preview Pane

- When **Update Automatically** is checked, a preview of the current print job displays here. The drawing sheet displays as a white rectangle, and if multiple sheets are required, you can scroll through them. If the print job is large, a progress dialog may display briefly as the preview draws or updates.

10 Information

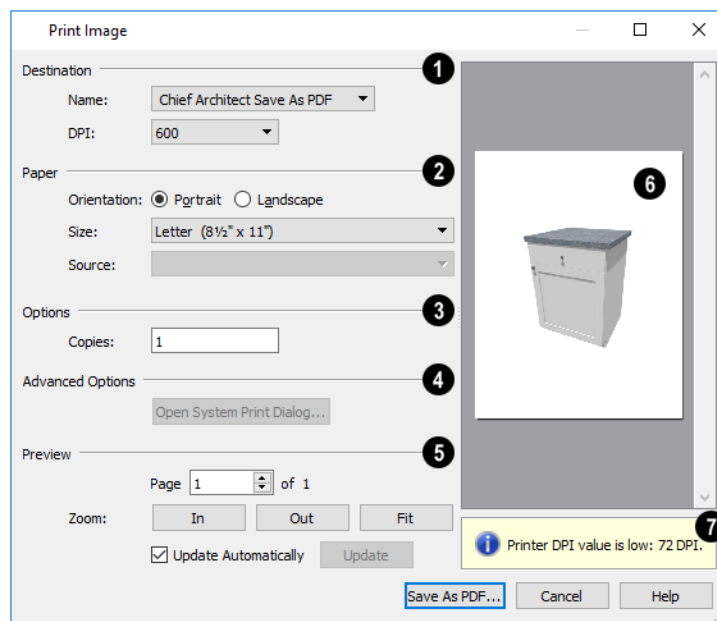
To help prevent unwanted printed output, information messages regarding page size, resolution, and scale may display below the preview pane, depending on the settings in this dialog.

Print Image Dialog



Any view can be printed by selecting **File> Print Image**. This is the only way to print most 3D views. See [3D Rendering on page 86](#).

The Print Image dialog is similar to the Print View dialog; however, the printing process is different. **Print Image** prints individual pixels as opposed to vectors (lines).



1 Destination

Select the Name of the **Printer** you wish to use from the drop-down list. To print to **.pdf**, select “Chief Architect Save as PDF” from the list, or choose a **.pdf** writer installed on your system. See [Printing to a PDF File on page 98](#).

2 Paper

Select the **Paper Orientation**, **Size**, and **Source**.

3 Options

Specify the number of **Copies** you would like to print.

4 Advanced Options

Click the **Open System Print Dialog** button to close the Print View dialog and print using your operating system's Print dialog instead. Not available when No Printer is selected.

5 Preview

Control the appearance of the print job **Preview** on the right side of the dialog.

- Specify which **Page** displays in the Preview area.
- Click the buttons to **Zoom In**, **Zoom Out**, or **Fit** the selected Page to the extents of the Preview.
- Uncheck **Update Automatically** to turn off the print job Preview and prevent it from updating as changes are made to the settings in this dialog.
- Click the **Update** button to update the print job Preview to reflect the current settings in this dialog. If Update Automatically is unchecked, clicking Update may force the Preview to be blank.

6 Preview Pane

When **Update Automatically** is checked, a preview of the current print job is displayed to the right. If the print job is large, a progress dialog may display briefly as the preview draws or updates.

7 Information

To help prevent unwanted printed output, information messages regarding page size and resolution may display here, depending on the settings in this dialog.

Index

- #
- 3D
 - Delete Surface 66
 - Mice 8
- 3D Views
 - Display 65
 - Floor Overview 63
 - Framing Overview 64
 - Full Overview 63
 - Overviews 62
 - Save 80
- A
- Align
 - Text 49
- Alphabets
 - International 41
 - Unicode 41
- Archive Files 22
 - Manage Auto Archives 23
- Arrow
 - Auto Positioning 52
- Auto
 - Archive 22
 - Save Files 23
- C
- Camera
 - Activating 80
 - Create Views 62
 - Defaults 61
 - Field of View 74
 - Move Tools 69
 - Move Up/Down One Floor 74
 - Orbit Tools 70
 - Specification Dialog 81
 - Tilt Tools 70
- Center
 - Text 49
- Change
 - Floor/Reference 57-58
- Close
 - Plans and Views 33
 - Program 26
 - Views 33
- Color
 - Off/On 37
- Colors
 - Selecting 38
- Compatibility
 - with other programs 19
- Contextual Menus
 - In Render views 74
- Copy/Paste
 - Main Edit Mode 51
 - Sticky Mode 51
- Cross Section Slider 75
- Cross Section/Elevation
 - Specification Dialog 84
- Cross Section/Elevation Views 64
- Cross Section/Elevations 62
- Crosshairs 9
- Current
 - Floor 57
 - Layout Page 14-15
- D
- Dashboard 5
- Defaults
 - Camera 61
- Delete
 - 3D Surface 66
- Dimensions
 - Tape Measure 15
- Display
 - 3D Views 65
- Dynamic
 - Print Preview 97
- E
- Edit
 - Handles 11
- Elevation Views 64
- Elevations
 - Interior 62
- Elevations, Wall 64
- Enhanced Metafiles 94
- Exit Program 26
- Export
 - EMF 94
 - Picture Files 94
 - Windows Metafiles 94
 - Windows Metafiles Dialog 94
 - WMF 94
- F
- F6 Key
 - Fill Window 32
- Field of View 74
- File
 - Management 18
 - Open 19
- Fill
 - Window 32
 - Window Building Only 32
- Floor
 - 3D Overview 62
 - Camera 62
 - Overview 62-63
- Floor Plan
 - View 13
- Floors
 - Change Floor/Reference 57-58
 - Current Floor 57
 - Floor Up/ Floor Down 57
 - Reference Floor 58
- Focus on Object 68
- Fonts 41
 - and Alphabets 41
- Framing
 - 3D Overview 64
- Full
 - Overview 62-63
- G
- Gamepad
 - Enable 71
- Gamepad Settings 71
- Gamepads 68
- Getting Help 15

H

Help
Tool Tips 15

I

Images
Printing 101

L

Layer
Display Options Dialog 36
Layer Sets 37

Layout
Change Pages 15
Current Page 14-15
Page Up/Down 15
Saving 20

Left Mouse Button
Definition 8

Line
Color 53
Specification Dialog 53

Line Style 53
Panel 53

M

Main
Edit Mode 51

Manage
Auto Archives 23

Menus 9

Message Boxes
Reset 13

Metafile Size Dialog 94

Metafiles 94

Middle Mouse Button 8, 32

Mouse
3D 8

Mouse Buttons
Using 7

Move
Camera with Mouse 68

O

Open
Object 10
Plan Files 19
View 80

Overview 4
Floor 63
Full 63

P

Page
Down 15
Up 15

Pan
Pan Window Tool 33
the Display 32
Using the Keyboard 32
Using the Mouse 33
Using the Scrollbars 33

Paragraph Options Dialog 45

Paste 49

Paste Image 49

PDF
Print to 98

Picture Files
Export 94

Plan
Files, Opening 19
Saving 20
View 13

Pointer
Coordinates 13
Crosshairs 9

Print 96
Across Multiple Pages 97
Clear Printer Info 97
Color or Black and White 100
Dialog 98
Options 97
Preview 97
Tiled 97
to PDF File 98

Print Image 80
Dialog 101

Printers
Select Printer 99

R

Redo 23

Referenced Plan Files Dialog 25

Render
Tips 87

Rendering Techniques 89
Defaults 90
Options 90

Reset
Message Boxes 13

Rich Text
Specification Dialog 43
Text Color 44

Right Button Definition 8

S

Save
3D Views 80
and Save As 20
Layout 20
Plan 20

Scrollbars 33

Section Views 64

Select
Multiple Objects 47
Next Object 46
Next Object Tool 47
Objects button 46
Objects Tool 47
Similar Objects 46

Select Color Dialog 38

Shadows 87
Ray Casted 87

Specification Dialogs
Camera 81
Cross Section/Elevation 84
Line 53
Rich Text 43

Status Bar 12

Sticky Mode 51

Swap
Views 29

T

Tab Key *46*

Tape Measure *15*

Text

- Aligning *49*
- Arrows *51*
- Bullets *46*
- Creating *42*
- Displaying *42*
- Editing *47*
- Layer *42*
- Line Spacing *45*
- Lists *46*
- Move *48*
- Numbering *46*
- Paragraph Options *45*
- Reshape *48*
- Resize *49*
- Rotate *48*

Tiling Views *30*

U

Undo *23*

Undo Zoom *31*

V

Views

Tiling *30*

Virtual Reality *75*

W

Wall

Elevation *62*

Wall Elevation *64*

Windows Metafiles *94*

Z

Zoom *31*

- Fill Window *32*
- Mouse Wheel *8, 32*
- Tools *31*
- Undo Zoom *31*