

# Chief Architect Viewer X13

*Professional 3D Home Design Software*



# Reference Manual

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

June 02, 2021

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# 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.
- Search for plans in a plan database.

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

### TOPICS

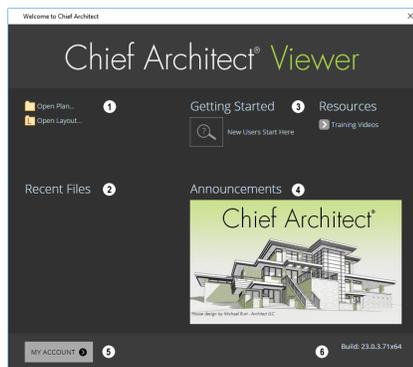
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## Startup Options



When Chief Architect opens, the Startup Options dialog displays, allowing you to choose how you want to begin working in the program or access useful resources.

The Startup Options dialog can be opened at any time by selecting **File > Startup Options** .



### 1 New/Open File

Choose **Open Plan**  or **Open Layout**  to view a plan or layout file. See *Opening a Plan or Layout File*.

### 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](http://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 Login page on our website.

### 6 Build

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

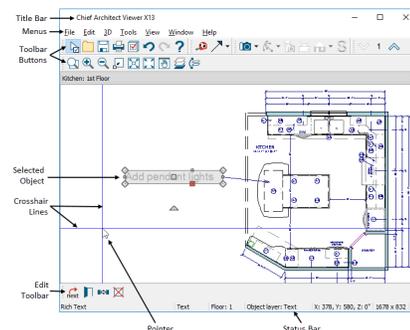
## The Chief Architect Viewer Environment

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. The current position of your mouse pointer displays in the Status Bar at the bottom of the program window.

Architectural objects take up space in all three dimensions and their height, width and depth can be specified in Imperial or metric units. In addition, the location of objects can be precisely defined using coordinates, again specified in Imperial 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 11* 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.

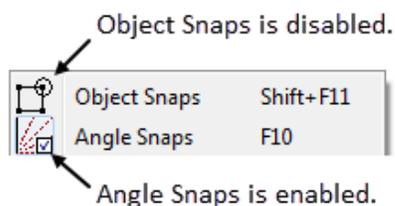
You can quickly select and edit the location, size, shape, style and other properties of objects as well as change the materials applied to their surfaces.

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, its icon will display a small check mark at its lower right corner and have a border around it.



Many of these interface elements are global Preferences while others are file-specific default settings. See *Default Settings vs Preferences*.

## 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*.

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 10*.

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 11*.

### 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 22*.

### 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 47*.

### TRACKPADS

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

In macOS™, you can Command + 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. 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 47*.

### CROSSHAIRS

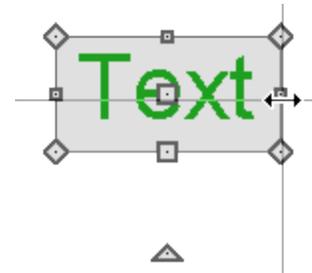
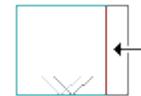
✚ Crosshairs help you position the pointer relative to objects in a view while drawing and editing. They can be set to display in Plan and Elevation views. Select **View > Crosshairs** to toggle crosshairs on or off.

### EDIT HANDLES

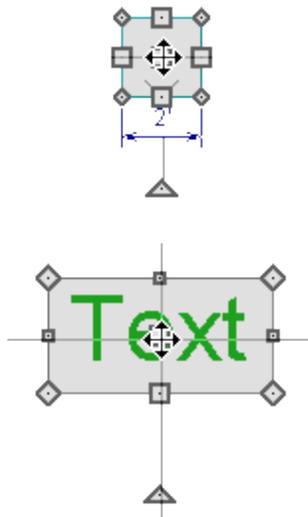
A selected object has edit handles that can be used to modify its size, position, and orientation. When you move the pointer over an edit handle, information about what it does displays in the Status Bar and the pointer changes to suggest how you can use it.

- A two-headed arrow indicates that the object, corner or edge can be moved in the direction of the arrows.
- A four-headed arrow indicates that the selected object or edge may be moved in multiple directions.
- A circular arrow indicates that the selected object can be rotated.

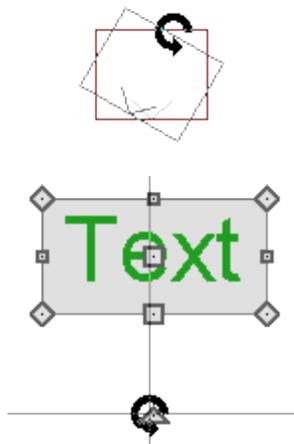
Resize handles display along the edges of the object are used to change the size.



The Move handle at the object's center lets you move the object. 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.



The triangular Rotate handle lets you rotate the object.



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

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.

## View and Side Windows

Chief Architect Viewer's main program window has a number of important features that let you interact with the program, such as toolbars and menus. It also features two different kinds of windows: view windows and side windows.

### VIEW WINDOWS

View windows are sometimes referred to as "the drawing area" because most of them are windows in which you can draw or place architectural and/or CAD objects. There are a number of different types of view windows in Chief Architect:

- Plan views
- Camera views and overviews
- Cross section/elevation views
- Materials Lists
- Layout

View windows can be navigated by panning and zooming. You can also enable scrollbars on their right side and bottom. Select **View > Scrollbars**  to toggle their display. See [View Tools on page 22](#).

Although only one view window can be active at any given time, there is no limit to the number of view windows that can be open. View windows can be tiled or tabbed, and you can navigate between them in a number of different ways. See [Window and View Tools on page 20](#).

You can also tear a view window out of the main program window. This creates a second, separate program window complete with toolbars and menus. Individual view windows can be torn out and transferred between program windows.

### SIDE WINDOWS

Side windows are so-named because they are typically docked to either the left or right side of the program window - although, they can also be docked to the top or bottom, or undocked entirely. There are side windows in Chief Architect:

- [Child Tool Palette](#)
- [The Library Browser](#)

Each of these side windows can be opened via the **View** menu or by clicking the toolbar button associated with it. Similarly, each can be closed by clicking the **Close** button in its title bar or tab, via the **View** menu, or by clicking its toolbar button. See *View Tools on page 22*.

To undock a side window, either drag its title bar out into the drawing area or click the Undock button on its title bar. To dock a side window, drag its title bar to any side of the program window. You can also double-click on its title bar to return it to its last docked location.

Two or more side windows can be docked together to form a shared side window, and can be tiled and/or tabbed within that shared window. To create a shared side window, begin by docking a side window to a side of the main program window, then:

- To create tabbed side windows, drag a second side window over the first. When the docked window becomes highlighted, release the mouse button.
- To create tiled side windows, drag a second side window over the first. When the docked window becomes highlighted, slowly drag the mouse towards one of its sides. When a highlighted space is created along that side, release the mouse button.

You can choose to disable **Side Window Drag Docking** in the Preferences dialog, and you can also enable **Top/Bottom Docking**. See *Appearance Panel*.

Side windows can also be set to their initial states in the Preferences dialog. See *Reset Options Panel*.

## 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

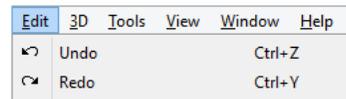
used to access nearly all tools in the program. Click on a menu name to expand it, then click on a menu item to either activate that tool or access the item's submenu. Items with a submenu have an arrow to the right of the name.

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 left of its button icon. See *Toolbars and Hotkeys*.

The Edit Toolbar is a special toolbar with buttons that can be used to modify a selected object. The buttons on this toolbar vary, depending on the type of object selected, the current view, and how you selected the object; when no object is selected, it is blank. See *Using the Edit Tools on page 33*.

## 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.

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

---

## 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.
- 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” checkbox. 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, click the **Reset Message Boxes** button in the Preferences dialog. See *Reset Options Panel*.

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 20*.

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 38*.



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 41](#).



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.



## LAYOUTS

All views can be exported as a graphic image. See [To export a picture on page 62](#).

## 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.

More information is available on Chief Architect's website, [chiefarchitect.com](http://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 11](#).

### 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 F1 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 F1 key to open the Help to a page with more information about the tool.
- When an object is selected, press the F1 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 F1, 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 11*.

## TECHNICAL SUPPORT

If you encounter a problem while trying to use Chief Architect Viewer X13, select **Help> Technical Support** to launch your default web browser to our Technical Support home page at [www.chiefarchitect.com](http://www.chiefarchitect.com).

Chief Architect strives to make our documentation as helpful as possible. Please send any suggestions to: [documentation@chiefarchitect.com](mailto:documentation@chiefarchitect.com).

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## About Chief Architect

Select **Help> About Chief Architect** in Windows<sup>®</sup> or **Chief Architect> About Chief Architect** in macOS<sup>™</sup> 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

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 Startup Options dialog. See *Startup Options on page 6*.

## Chapter 2

### TOPICS

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## Compatibility with Other Programs

Plans and layout files produced in the following programs can all be read by Chief Architect Viewer X13.

- Chief Architect® 10.0 through X12
- 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 2021.

Files that have been opened and saved in the Chief Architect Viewer X13 can be read again in Version X13 Chief Architect programs and Version 2021 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 X13 cannot be read by any of the program versions listed above.

Plans and layout files produced in the Windows® version of Chief Architect Viewer X13 can be read in the Mac® version, and vice versa.

## Chief Architect Viewer Data

When Chief Architect Viewer X13 is installed, the program automatically creates a folder in the user Documents directory called **Chief Architect Viewer X13 Data**. This folder contains important information and should not be moved, renamed or deleted.

Because the Chief Architect Viewer X13 Data contains custom user data, it is not deleted when the program is uninstalled.

## 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 computer where you would like to save the file.
3. Particularly if you were sent both plan and layout files, it is best to use the same location as the original files. See [Opening a Plan or Layout File](#).
4. In the **File name** text field, type a name for the file.



Rather than type a new name, you can click before the file name to place your cursor at that location, then type “Edited\_” to distinguish this file from the original.

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**.

### 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.



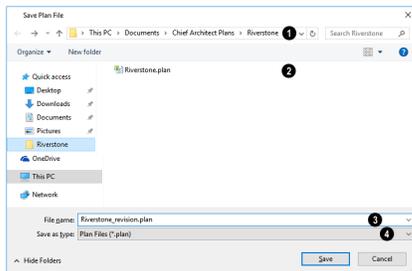
**Save As** opens the Save File dialog, allowing you to save the plan or layout file using a different name or location on your computer.

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** dropdown list. When exporting, you may need to choose a specific file type.

## EXPORTING FILES

Chief Architect has options for exporting information out of and your drawings. See *Pictures and Metafiles on page 61*.

File export dialogs are simply versions of the Save File dialog. See *Save File Dialog on page 16*.

Similarly, file import dialogs are often similar to the Open File dialog. See *Opening a Plan or Layout Files on page 17*.

If you transfer a plan file from one computer to another, the program will warn you of missing files if the external data files used by the plan cannot be found when you open it.

It is strongly recommended, however, 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.

Instead, copy your files to such locations only after you have saved them on your computer's hard drive and exited the program.

Similarly, you should never open files saved in these locations. Copy the files to the local hard drive, and then open them. See *Opening a Plan or Layout Files on page 17*.

Archive folders are used by Chief Architect to manage prior versions of your files. You should not view these files as a substitute for your own backup routine, and should never save a file in an archive folder. See *Auto Archive on page 16*.

When backing up your Chief Architect files, consider backing up not only your **.plan** files, but your custom user data, as well - including library content, toolbar configurations, and textures. This custom data is all located in the Chief Architect Viewer Data folder, so it can be easily backed up. See *Chief Architect Viewer Data on page 15*.

---

## Auto Archive

The first time a plan or layout is saved, an Archive folder is automatically created in the Chief

Architect Viewer X13 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** on the keyboard, 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\_2021\_1\_15.plan

JonesResidence\_2021\_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. See [Opening a Plan or Layout File](#). As soon as the file is open, use **Save As**  to save this file to another location.

### 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 one 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** on the keyboard.

## Opening a Plan or 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.

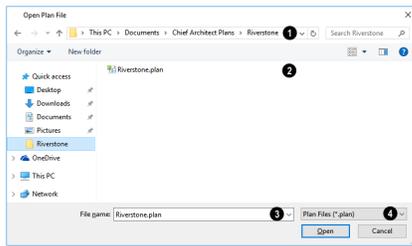
Plan and layout files often refer to external support files such as images that your design professional may have also given to you. It is best to keep all files associated with your drawings in the same folder.

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.

## RECENTLY OPENED FILES

A list of recently opened and saved plan and layout files can be accessed by selecting **File> Open Recent Files**. Select one of these files to open it without using the Open File dialog.

The names of recent files also display in the Startup Options dialog. Click on the name of a file to open it. See [Startup Options on page 6](#).

## 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 on your keyboard.

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 on your keyboard.

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

- Save and Save As. See [Files on page 15](#).
- Changes made in the Library Browser. See [The Library Browser](#).
- Changes made in a dialog while the dialog box is open. See [Dialogs](#).
- Changes made to the display by panning the display or zooming in or out. See [Undo Zoom on page 23](#).
- Changes made to the position of a camera, or its Rendering Technique. See [Editing 3D Views on page 52](#).

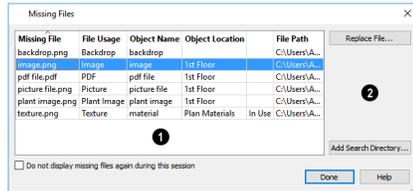
## Referenced Files

Chief Architect plan and layout files often reference a variety of external files 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.

## 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

- .
- 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.
- 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.

## Exiting Chief Architect

Select **File> Exit** to exit the program. If you have not saved any open files, you will be reminded to do so. It is better to save your work before exiting than to save on exit. See [Closing Views and Files on page 24](#).

When you exit from the program using **File> Exit**, all Autosave files and Undo files are automatically deleted. See [Auto Save Files on page 17](#) and [Undo and Redo on page 18](#).

On a Mac, if you click the program window's red **Close** button, the window will close but the program itself will continue to run. To close it down completely, right-click on its icon on the Dock and select **Quit** from the contextual menu.

# 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.

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<b>Working in Multiple Views</b> .....	<b>21</b>
<b>View Tools</b> .....	<b>22</b>
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## View Windows

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

- *Plan Views*
- *3D Views, see page 41*
- *Cross Section/Elevation Views, see page 42*
- *Layout*

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 41* and *Working in Multiple Views on page 21*.

- 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.

You can specify that any camera, or cross section/elevation view be saved. See *Saving 3D Views on page 54*.

### VIEW SPECIFICATION DIALOGS

- *Camera Specification Dialogs, see page 54*
- *Cross Section/Elevation Specification Dialogs, see page 56*
- *Materials List Specification Dialog*

### CLOSING VIEW WINDOWS

There are a number of ways to close view windows. See *Closing Views and Files on page 24*.

---

## 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, Viewer 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 41*.

There are several ways to close a view window. See *Closing Views and Files on page 24*.

### 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.



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 on the keyboard 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.
- On a Mac, press the Ctrl + } (Next Window) or Ctrl + Shift + { (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.

---

## 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 46*.

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.

-  **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 operation. See *Undo Zoom on page 23*.
-  **Fill Window** - Fits all visible items on screen. See *Fill Window on page 23*.
-  **Fill Window Building Only** - Fits all walls and railings on the current floor on screen.

## 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 46*.

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

---

## Undo Zoom

Select **Window> Undo Zoom**  to reverse the last zoom operation.

Note: Undo and Redo do not affect zoom.

**Zoom** and **Undo Zoom** are also available through the contextual menu. See *Menus, Toolbars, and Hotkeys on page 10*.

---

## 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 on the keyboard 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 Viewer, 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 Viewer setting.

### USING A MAC TRACKPAD

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

### USING THE PAN WINDOW TOOL

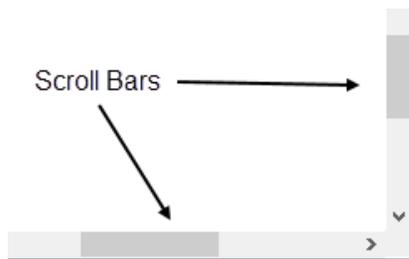


The **Pan Window** tool works much like the mouse wheel method.

- 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. See [View Windows on page 9](#).



- 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** on the keyboard 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 [Files on page 15](#).



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 19](#).

# Displaying Objects

## Chapter 4

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

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## Layers

Layers are used to organize and manage the display of all objects in all views. A layer can be thought of as a transparency 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 find out which layer an object is on by selecting the object and looking at the Status Bar. And, you can specify whether each layer displays in a particular view in the Layer Display Options dialog. See *The Status Bar on page 11* and *Layer Display Options Dialog on page 26*.

Multiple layers are organized into Layer Sets, which allow you to control which objects display in different views. See *Layer Sets*.

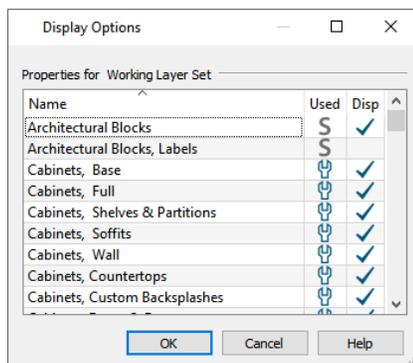
## Layer Display Options Dialog



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 Floor on page 39*.



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.

## 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 64*.

### 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**.

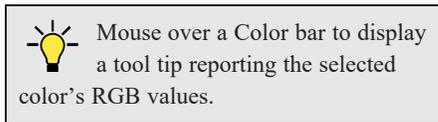
- If **Color** is toggled off in any 3D view other than a Vector View, the view will be displayed in grayscale.
- If **Color** is toggled off in any line based view, including plan view, Vector Views, and layout, the view will be displayed in black and white

## DELETE SURFACE

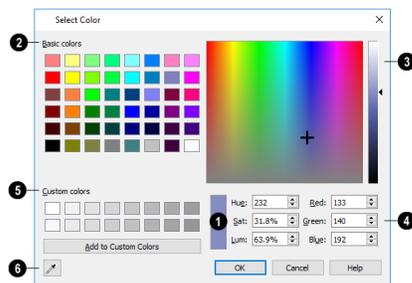
 In any 3D view, select **3D > Delete Surface**, then click a surface in the view to temporarily remove the surface from the current view. See *Delete 3D Surface on page 46*.

## 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

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. TODO - NEED TEXT PARENT HELPID FOR CAVIEWER - IDC\_TEXT\_PARENT

## Chapter 5

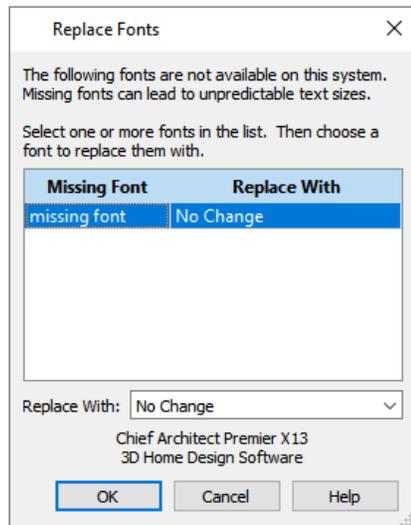
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## Fonts and Alphabets

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

If you open a plan or layout file that uses a font that is not installed on the current computer, the program will give you an opportunity to replace it in the Replace Fonts dialog.



The table lists all missing fonts 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. See *Shift and Ctrl Select*.
- 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 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.

## Creating Text

Text can be created in plan view, in cross section/elevation views, and on layout pages. See *View Windows on page 21*.

Once created, text can be selected and edited in a variety of ways. See *Editing Text on page 32*.

### 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 30*.
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 32*.
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 of it.

You can also create lines with arrows connecting the text that you create to items in the drawing. See *Text Arrows on page 34*.

## Displaying Text

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 26*.

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 30*.

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 30* and *Line/Polyline Specification Dialog*.

## 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.

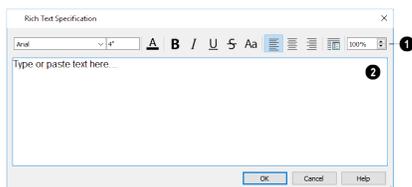
**Arrow Lines**  have their own specification dialog. See *Line/Polyline Specification Dialog*.

### 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 27*.
- 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.

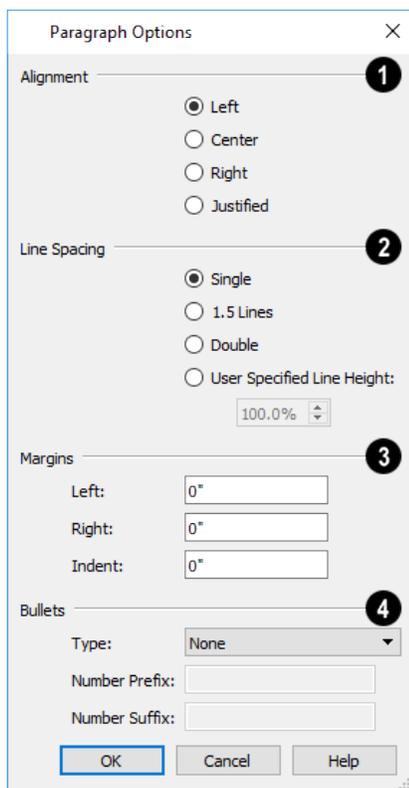
Note: Some fonts cannot be drawn at certain zoom factors. When this is the case, the appearance of the text will not change.

## 2 Text Entry Field

Type or paste text in the Text Entry field. See *Copy, Cut and Paste on page 34*.

- 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 11*.
- 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.

## PARAGRAPH OPTIONS DIALOG



### 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 Chief Architect can be selected and edited. An object must be selected before it can be edited. See *Editing Text on page 32*.

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 11*.

A selected object remains selected until another object is selected, a different tool is activated, the Esc key on the keyboard 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 **Space** bar on your keyboard 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.

## 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 Polylines 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 11*.

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.

## 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.

## 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 30*.



A customized text object can be added to the Library for future use. See *Add to Library*.

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 31*.

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.

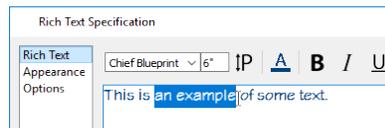
## EDITING TEXT ATTRIBUTES

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

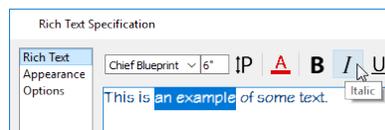
In order to edit the attributes of an existing **Text** object, you must select some or all of the text before making changes. See *Text Panel on page 30*.

### To edit Text attributes

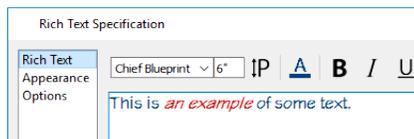
1. Select a **Text** object and click the **Open Object**  edit button.
2. On the **TEXT** panel of the Rich Text Specification dialog, click and drag to select some or all of the text typed into the Text field.



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.

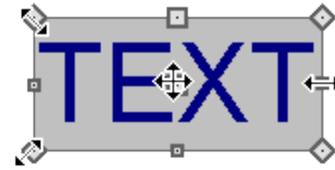


4. As changes are made, the selected text updates. Only the selected text is modified.



## 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. **TODO** - show a polyline - also mention closed, fill



## USING THE EDIT TOOLS

A selected **Text** object can be edited in a variety of ways using the buttons on the Edit Toolbar. See *the Edit Toolbar*.

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 on your keyboard.

### 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 30*.

### COPY, CUT AND PASTE

Copy, Cut and Paste of text into and out of the Rich Text Specification dialog can be accomplished using keyboard hotkeys:

- Press Ctrl + X to Cut the selected text and save it to the system clipboard.
- Press Ctrl + C to Copy the selected text and copy it to the system clipboard.
- Press Ctrl + V to paste your last cut or copied selection in a new text object.

Copy, Cut and Paste use the system clipboard, making it possible to transfer text between text objects, between Chief Architect files, from a plan or layout into another application, or vice versa. See *Copying and Pasting Text on page 34*.

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## Copying and Pasting Text

The Copy, Cut and Paste commands use the system clipboard, making it possible to transfer text between text objects, between Chief Architect files, from a plan or layout into another application such as a text editor or spreadsheet program, or vice versa.

Cut, Copy, and Paste can also be accessed from the Edit menu of many applications, including Chief Architect. These menu commands are not available when the text specification dialogs are open, but you can use the associated hotkeys.

### *To Copy, Cut and Paste text*

1. On the TEXT panel of either 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 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 at the location of your cursor.

Bear in mind that when text is copied and pasted, its formatting is not always retained. The results depend on the program or type of text object in which the content was created as well as the type of text object into which it is pasted.

### PASTING INTO RICH TEXT

**T** Text pasted into a **Rich Text** object from another source will retain most - but not necessarily all - of its custom formatting. If a line of text is sufficiently long, however, it may be wrapped automatically when pasted into Rich Text.

Text pasted into a **RichText** object from a spreadsheet program retains basic column and row information. Column width cannot be adjusted; however, as you add or remove text from a cell, row height will increase or decrease to accommodate your changes.

### PASTING INTO A VIEW

Text can also be pasted directly into a plan or elevation view. When you use the Paste command, a new Rich Text object is created, the text is pasted into that object, and it is selected. In order to see the new object, you may need to Fill Window.

---

## Text Arrows

Text arrows can be used to connect text objects to details of interest in your drawing.

When a selected Arrow Line is snapped to an object on either end, its end edit handle will

display the Selected Edge Handle Fill color. See [Colors Panel](#).

Text arrows 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.

Lines with arrows can be independent or attached to other objects. If an attached object is moved, the end of the Arrow Line will move, as well. 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.

If an arrow is attached to text or another object, deleting either the text or the object will also delete the arrow.

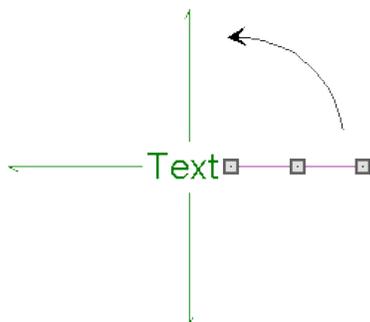
### ARROW LINE

 **Arrow Lines** can be attached to text and architectural objects by selecting **Tools> Arrow Line** and then clicking and dragging to draw a line. There is no limit to the number of text lines with arrows that can be attached to an object.

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

### 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 [Polyline Specification Dialog](#).

### 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 31](#).

**Open Object** opens the specification dialog for  the selected object. See [Specification Dialogs](#).

**Copy/Paste** copies the selected object(s) to the system clipboard so they can be pasted elsewhere. See *Copying and Pasting Objects*.

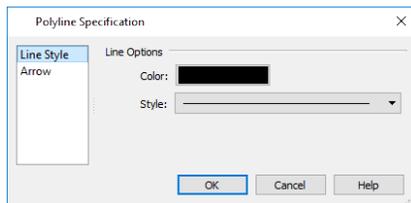
**Delete** deletes the selected object(s). See *Deleting Objects*.

## Line/Polyline Specification Dialog

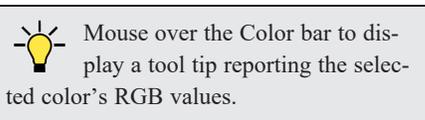
Select an Arrow Line and click the **Open Object** edit button to open the Line Specification dialog. If the object is composed of multiple segments, the Polyline Specification dialog will open instead.

The Line/Polyline Specification dialog has a total of three panels:

### LINE STYLE PANEL



- Click the **Line Color** box to specify a new line color. See *Select Color Dialog on page 27*.



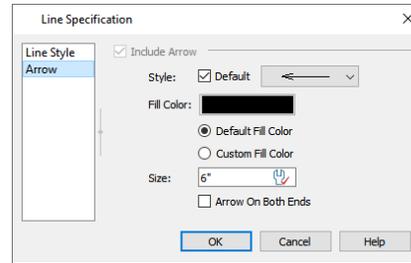
- Click the **Line Style** drop-down list to select from a variety of available line styles.

An additional **Display Options** setting is available in the Picture File, Metafile, and PDF File Box Specification dialogs. See *Pictures and Metafiles on page 61*.

- Check **Show Outline** to display the selected object's border polyline.

### ARROW PANEL

The ARROW panel is available for Text Lines consisting of one segment as well as for those with multiple segments that form an open polyline shape. It is not available for closed polylines.



- 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 27*.
- 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. See *Fill Style Panel on page 37*.

## Polyline Specification Dialog

Select an Arrow Line composed of multiple segments and click the **Open Object** edit button to open the Polyline Specification dialog. If the object is composed of only one segment, see *Line/Polyline Specification Dialog on page 36*.

### LINE STYLE PANEL

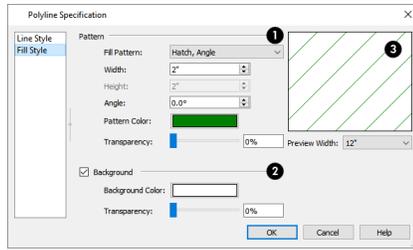
For information about the LINE STYLE panel, see *Line Style Panel on page 36*.

## ARROW PANEL

The ARROW panel is available for Text Lines consisting of multiple segments that form an open polyline shape. It is not available for closed polylines. See *Arrow Panel on page 36*.

## FILL STYLE PANEL

The FILL STYLE panel is available for closed polylines, but not for open polylines.



### 1 Pattern

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

- Specify the **Width** of the selected fill pattern. Not available for Solid fill.
- Specify the **Height** of the selected fill pattern.
- Specify the **Angle** of the selected fill pattern. Not available for Solid fill.
- Specify a custom **Pattern Color** for the lines that make up the fill pattern or Solid fill by clicking the color bar. The color assigned to the selected object's layer is used by default. See *Select Color Dialog on page 27*.
- Use the **Transparency** slider bar or text field to control how transparent the fill pattern lines are. This setting also affects the transparency of Solid fill colors.

### 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).

## Multiple Floors

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.

## Chapter 6

### TOPICS

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<b>The Reference Floor</b> .....	<b>39</b>

## Displaying Floors

Chief Architect Viewer allows you to view the floors in your plan in a variety of ways.

### IN PLAN VIEW

In plan view, only one floor can be active for editing at a time. This is referred to as the Current Floor. See *The Current Floor on page 39*.

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 Floor on page 39*.

### IN 3D VIEWS

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

See *3D View Tools on page 42*.

## 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 21*.

### 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 Floor on page 39*.

## The Reference Floor



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.

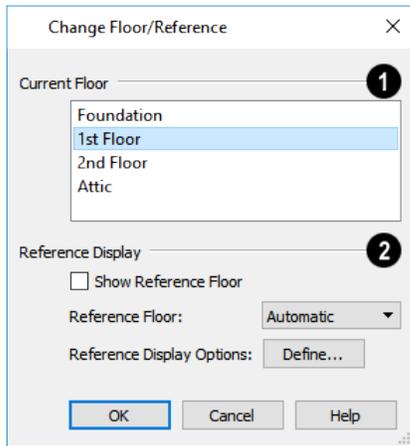
When the Reference Floor Display is turned on, the floor level below the Current Floor is used as the Reference Floor. If there is no floor level below, the floor above is used. The Reference Floor displays in red.

Note: When objects on the Current Floor and the Reference Floor align and lines of two different colors are superimposed upon each other, discoloration may result.

### CHANGE FLOOR / REFERENCE DIALOG

By default, the floor below the Current Floor is the Reference Floor, but any floor can be referenced using the Change Floor/Reference dialog. To open the dialog, select **Tools> Floor/Reference Display> Change Floor/Reference** or click the toolbar button that reports the current floor level.

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

The **Reference Display** settings are only available in plan view.

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](#).

## SWAP FLOOR/REFERENCE



Click the **Swap Floor/Reference** button to move to the floor level shown in the Reference Floor Display, making it the new Current Floor. At the same time, the original Current Floor becomes the Reference Floor.

# 3D Views

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.

## Chapter 7

### TOPICS

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## Camera Defaults Dialogs

 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 52*.

### FULL CAMERA DEFAULTS

Specify the initial attributes of cameras created using the **Full Camera**  tool. See *Camera Views on page 42*.

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 43*.

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 43*.

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 42*.

The settings in this dialog are also found in the **Cross Section/Elevation Specification** dialog. See

*Cross Section/Elevation Specification Dialogs on page 56*.

## 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 44*.

### 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 44*.

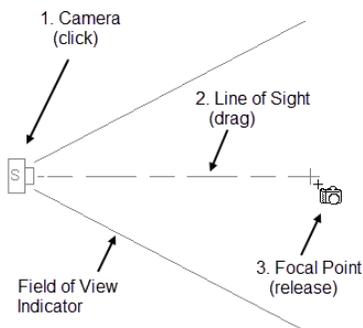
 A **Cross Section/Elevation** view displays all floors of the model. If the view is created outside the structure looking toward it, the result is an exterior elevation. If the view is created inside the structure, or passes through any of the structure, a cross section is created.

## 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.
  - 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 21](#).

A new camera can also be created by copying and pasting an existing camera symbol selected in plan view. See [Copying and Pasting Objects](#).

### 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 of 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 54](#).

## 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.

A new overview camera can also be created by selecting an existing overview camera in plan view and then copying and pasting it. See [Copying and Pasting Objects](#).

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 52](#).

### 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

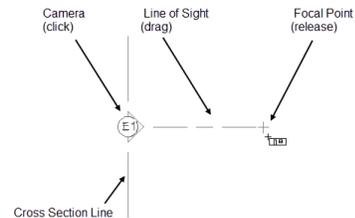
 A **Cross Section/Elevation** view displays all floors of the model. The cross section begins at the point where the camera arrow is drawn and continues through the entire model.

 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.

Cross section/elevation views are the only 3D views that can be annotated with the Text tools. See *Text on page 28*.

### 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.



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 56*.

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 Objects*.

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.

## DETAILING CROSS SECTION/ELEVATION VIEWS



Text objects can be created in cross section/elevation views. 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 28](#).

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## 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 52](#).

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 21](#).



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. See [Rebuild 3D](#).

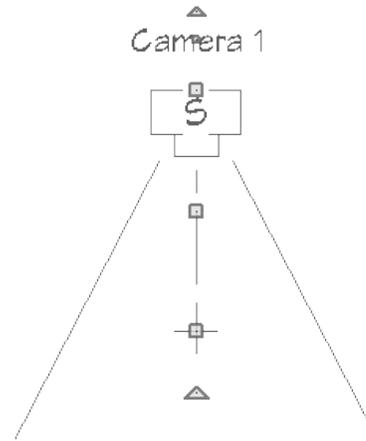
## LAYER DISPLAY OPTIONS

As in plan view, the display of objects in 3D views can be controlled by layer. See [Layer Display Options Dialog on page 26](#).

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

## 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 26](#).

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 43](#).

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 39](#).

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 26*.

### 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 26*.
- 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.
- Generate a new 3D view.

## Navigating in Camera Views

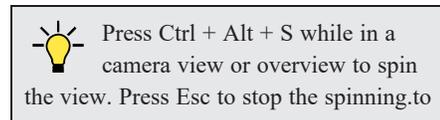
Once a 3D view is created, there are many ways to manipulate the camera location and the direction of its line of site using the mouse, the keyboard, and the menus.

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 54*.

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.



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 39*.

### 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 43*.

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. .

### 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, pre-programmed view direction hotkeys are supported on devices with buttons for that purpose. MacOS™ does not provide mapping support to the view direction commands. See Hotkeys.

You can specify whether navigation is centered about the camera or its focal point in the Preferences dialog. See *Render Panel*.

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 51*.

### 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.

	Primary Behavior (Left-Click)	Alternate Behavior (Right-Click)
<p><b>Mouse-Orbit Camera</b></p> 	<p>Left-click and drag to rotate the camera around its focal point. The camera's position and direction both change.</p> <p>You can temporarily activate <b>Mouse-Tilt Camera</b> by using the right mouse button while the Mouse-Pan Camera or Mouse-Tilt Camera mode is active.</p> <p>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.</p>	<p>Right-click and drag to tilt the camera instead of orbiting.</p>
	<p>In the Mac version of the software, you can temporarily activate <b>Mouse-</b></p>	

	Primary Behavior (Left-Click)	Alternate Behavior (Right-Click)
	<p><b>Orbit Camera</b> 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.</p>	
<p><b>Mouse-Pan Camera</b></p> 	<p>Left-click and drag to move the camera in any direction. The camera's position changes, but its direction does not.</p>	<p>Right-click and drag to orbit instead of panning.</p>
<p><b>Mouse-Dolly Camera</b></p> 	<p>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.</p>	<p>Right-click and drag to tilt the camera instead of dollying.</p>
<p><b>Mouse-Tilt Camera</b></p> 	<p>Left-click and drag in any direction to tilt the camera, changing its view direction but not its position.</p>	<p>Right-click to orbit instead of tilting.</p>

	Primary Behavior (Left-Click)	Alternate Behavior (Right-Click)
	You can temporarily activate <b>Mouse-Tilt Camera</b> by using the right mouse button while the Mouse-Orbit Camera or Mouse-Dolly Camera mode is active.	
<b>3D Center Camera on Point</b> 	<p>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.</p> <p>To use this tool, activate it and then click on any object in the scene.</p>	N/A
<b>3D Focus on Object</b> 	<p>Lets you focus on a specific object by changing the camera's position, direction, focal point, and the length of its line of sight.</p> <p>To use this tool, activate it and then</p>	N/A

	Primary Behavior (Left-Click)	Alternate Behavior (Right-Click)
	click on an object in the scene. Alternatively, select an object in the view and click the <b>Focus on Selected</b> edit button.	

### 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
	<b>Move Camera Forward</b> moves the camera and its focal point forward.
	<b>Move Camera Back</b> moves the camera and the focal point back.
	<b>Move Camera Left</b> moves the camera and the focal point to the left in a line perpendicular to the line of sight.
	<b>Move Camera Right</b> moves the camera and the focal point to the right in a line perpendicular to the line of sight.
	<b>Move Camera Up</b> moves the camera and the focal point up.
	<b>Move Camera Down</b> 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
	<b>Move Camera In</b> moves the camera closer to the focal point along the line of sight. The camera cannot move past the focal point using this tool.
	<b>Move Camera Out</b> moves the camera away from the focal point along the line of sight.
	<b>Orbit Camera Upward</b> rotates the camera up about the focal point. The camera cannot rotate past a vertical line looking straight down on the focal point.
	<b>Orbit Camera Downward</b> rotates the camera down about the focal point. The camera cannot rotate past a vertical line looking straight up at the focal point.
	<b>Orbit Camera Left</b> rotates the camera to the left about the focal point.
	<b>Orbit Camera Right</b> 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
	<b>Tilt Camera Upward</b> tilts the camera up while keeping it in the same location. The camera cannot tilt beyond the vertical position.
	<b>Tilt Camera Downward</b> tilts the camera down while keeping it in the same location. The camera cannot tilt beyond the vertical position.
	<b>Turn Camera Left</b> turns the camera to the left while staying in the same location.
	<b>Turn Camera Right</b> 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.

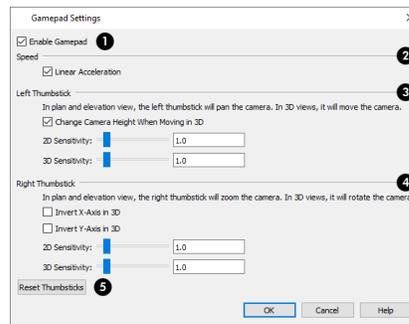
	Description
	<b>Front View</b> creates a front view of the model.
	<b>Back View</b> creates a back view of the model.
	<b>Top View</b> creates a top view of the model.
	<b>Bottom View</b> creates a bottom view of the model.
	<b>Left Side View</b> create a left side view of the model.
	<b>Right Side View</b> create a right side view of the model.
	<b>Restore Original View</b> restores the original view position.

## 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 47](#).

You can also open this dialog by clicking the Gamepad Settings button, which you can add to your toolbars. See [To add a button to a toolbar](#).

You can also specify whether navigation is centered about the location of the camera or its focal point in the Preferences dialog. See [Render Panel](#).



### 1 Enable Gamepad

Check **Enable Gamepad** 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

Specify the behavior of the **Left Thumbstick** in 2D and 3D views.

- 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.

#### 4 Right Thumbstick

Specify the behavior of the **Right Thumbstick** in 2D and 3D views.

- 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 the **Reset Thumbsticks** 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 the Camera 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 54*.



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 21*.

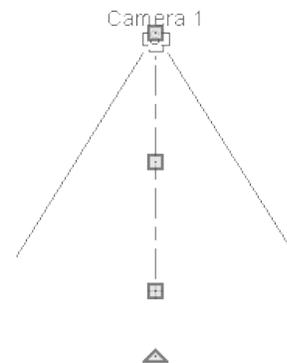
### USING THE EDIT TOOLS

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

### USING THE EDIT HANDLES

Return to plan view without closing the 3D view. See *Working in Multiple Views on page 21*.

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 11*.



- 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 45*.

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 of 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 22*.

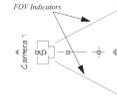
Selecting **Window> Zoom In** , **Zoom Out**  or **Fill Window**  does not change the camera's location or field of view. Instead, the extents of the view are expanded or cropped.

## 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 54*.

## 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.

Note: The Cross Section Slider is not available when the Vector View Rendering Technique is used. See *Rendering Techniques on page 58*.



### 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.
  - 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.
2. Move the Position slider to adjust the position of the cutting plane.
3. Repeat steps 1-3 to use additional cutting

planes if you wish.

4. Click **OK** to close the dialog.

---

## 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 54*.

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 46*.

### 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 62*.

In addition, Vector Views can be exported and saved as .emf files. See *Metafiles on page 62*.

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 24*.

---

## Camera Specification Dialogs



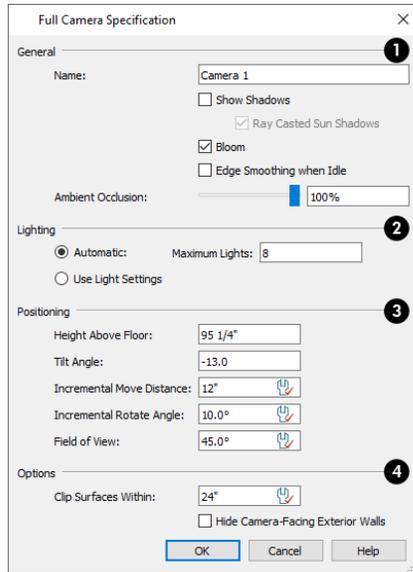
The Camera Specification dialog can be accessed in plan view by selecting one or more camera symbols and clicking the **Open Object** edit button. See *In Plan View on page 45*.



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 42*.

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 42*.



## 1 General

- Specify the **Name** that displays in the camera label in plan view.
- 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 sun light. Ray Casted Sun Shadows take longer to generate than regular shadows and only refresh when the camera is not moving.
- 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 58](#).
- Check **Edge Smoothing When Idle** to apply high quality edge smoothing to edge lines when the selected camera is not in motion. See [Edge Smoothing on page 58](#).

- 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. See [Ambient Lighting and Occlusion](#).

## 2 Lighting

The Lighting settings control which and how many light sources are used in the current view. See [Lighting Modes on page 58](#).

- 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.

## 3 Positioning

The Positioning settings determine the position and orientation of the camera. See [Navigating in Camera Views on page 46](#).

- The **Height Above Floor** defines the height that the camera is above the floor level for the current floor. See [Camera Height on page 43](#).
- 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.
- 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.

- The **Field of View** defines the camera's field of vision in angular degrees. See [Field of View on page 53](#).

#### 4 Options

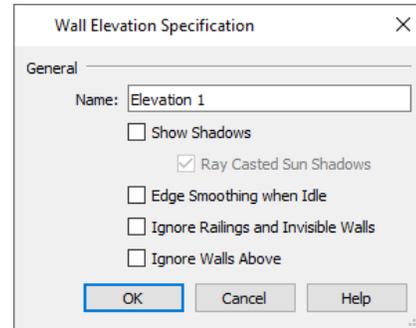
- **Clip Surfaces Within** - Objects located within this distance from the camera do not display in the view. Decrease this value to display objects located close to the camera; increase it to improve the appearance of some surfaces in Overview cameras with very large extents.
- Check **Hide Camera-Facing 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. See [Hide Camera-Facing Exterior Walls on page 58](#).

## 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 45](#).

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 Specification dialog as well as in the Cross Section/Elevation Defaults dialog. See [Camera Defaults Dialogs on page 42](#).



#### General

- The **Camera Name** displays in plan view.
- Check **Show Shadows** to turn on shadows in the selected camera view. When unchecked, shadows are not generated. See [Shadows on page 58](#).
- 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.
- Check **Edge Smoothing When Idle** to apply high quality smoothing to edge and pattern lines when the camera is not in motion. See [Edge Smoothing on page 58](#).

Two additional options are available for Wall Elevation cameras:

- Check **Ignore Railings and Invisible Walls** to ignore the room definition created by these types of walls in a selected Wall Elevation view. When this is unchecked, Wall Elevation views only recognize room definition created by regular walls. See [Cross Section/Elevation Views on page 44](#).
- 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. See [Structure Panel](#).

# 3D Rendering

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 41*.

## Chapter 8

### TOPICS

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<b>Lighting Modes</b> .....	<b>58</b>
<b>Rendering Techniques</b> .....	<b>58</b>
<b>Rendering Technique Options</b> .....	<b>59</b>

## 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.

### 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 54*.

### EDGE SMOOTHING



Angled surface edges will sometimes display on screen as jagged or stair-stepped. Edge Smoothing softens this effect, producing cleaner lines.

High quality Edge Smoothing can be produced by checking **Edge Smoothing When Idle** in the Camera Specification dialog. This setting does not affect a camera while its position or orientation are being changed, but applies additional smoothing to edge lines when the camera is not in motion. See *Camera Specification Dialogs on page 54*.

This high quality Edge Smoothing option is view-specific and can also be toggled on or off by selecting **3D> Camera View Options> Toggle Edge Smoothing When Idle** .

### 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 54*.

## 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 54*.

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, lights on floors above the camera are not used in Floor Overviews. See *3D View Tools on page 42*.

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.

## 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 require 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 52](#).

### 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 45](#).

### 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.

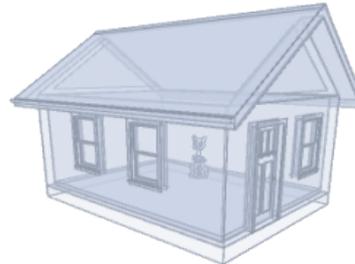


In plan view, the camera symbol for a view using the Vector View technique displays a V in its center.

### 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**.

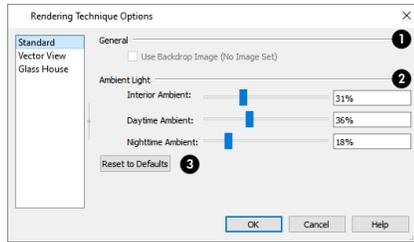
In the Rendering Technique Options dialog, select a technique from the list on the left to make its options active on the right. When this dialog is first opened, the technique currently used by the view is selected.

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

### 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 45](#).



### 1 General

- When **Use Backdrop** is checked, the backdrop image specified for this view is used. When unchecked, 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

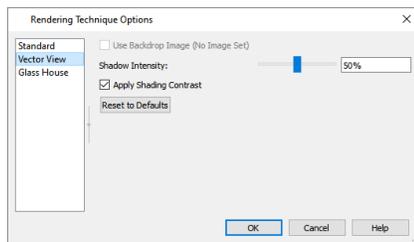
- Click **Reset to Defaults** to restore the default settings used when the Standard technique was first enabled.

## 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 45](#).



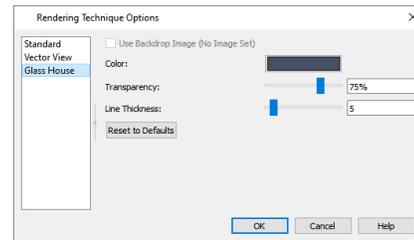
- Check **Use Backdrop** to use the backdrop image specified for this view. When unchecked, a solid color is used instead.

- 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.
- Check **Apply Shading Contrast** to use different levels of shading on surfaces oriented at different angles to the camera.
- 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** is checked, the backdrop image specified for this view is used. When unchecked, 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 27](#).
- 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

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## 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 62*.



Use the **Print Image** tool to either print or save the current view as a PDF file. See *Print Image Dialog on page 66*.

### 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 45*.
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 16*.

## 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 that will included in the metafile.
4. Release the mouse button to open the Export Metafile dialog, which is a typical Save As dialog. See *Exporting Files on page 16*.
5. When you click the Save button, the Metafile Size dialog opens.

The Metafile Size dialog box contains the following fields and buttons:

- Title: Metafile Size
- Text: Enter desired width of your picture: (measured in target document)
- Width: 6"
- Height: 4 1/8"
- DPI: 600
- Use Line Weight: 1
- Buttons: OK, Cancel, Help

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 59*.

Metafiles exported from plan view use the line weights defined in the Layer Display Options dialog. See *Layer Display Options Dialog on page 26*.

# Printing

Chief Architect Viewer provides a variety of printing options, 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.

## Chapter 10

### TOPICS

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<b>Print Image Dialog</b> .....	<b>66</b>

## 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 64*.



**Print** - Prints the current plan view, Vector View, or layout sheet to a specified scale. See *Print View Dialog on page 65*.



**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 66*.



You can also select **File> Export> Export PDF** to open the Export PDF dialog. See *Print View Dialog on page 65*.

**Clear Printer Info** - Clears the printer 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 65*.

The Reference Display does print if it is visible. See *The Reference Floor on page 39*.

## 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 64*.

### 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 64*.
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 65*.
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**.

- 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 65* and *Print Image Dialog on page 66*.

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

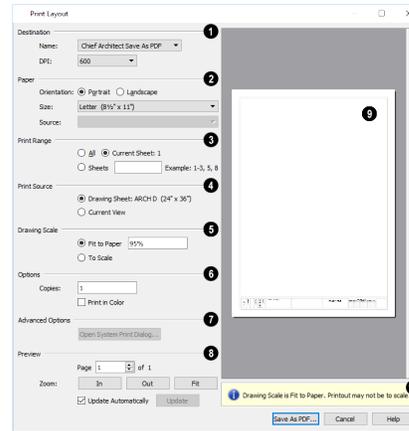


To print from plan view, 3D Vector Views, or layout, select **File> Print> Print**. The Print View or Print Layout dialog opens. The settings that are available will vary depending on which version of the dialog is open.



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 66*.



### 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 65*.
- 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.

### 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 of the printable objects in the view is ignored. This is selected by default when the Drawing Sheet is not displaying in the current view.

### 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.
- Select **To Scale** to print at the scale specified in the Drawing Sheet Setup dialog.

### 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.

### 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.

### 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.

### 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.

### 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.

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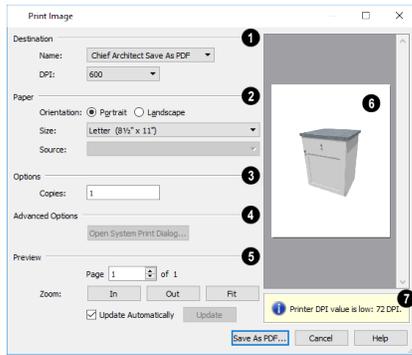
## Print Image Dialog



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 57*.

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 65](#).

### 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.

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.

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

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