



USER'S GUIDE



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Table of Contents

The Basics 1

Chapter 1: Welcome	1
Package Contents	2
System Requirements	2
Important Notes for Previous 3D Home Design Users	2
Backing Up Textures from Version 5	2
Uninstalling a Previous Version	3
How the Uninstallation Works	3
Installing 3D Home Architect® Landscape Design Deluxe 6	3
Starting the Program	4
Registering the Program	4
Starting a New Project	4
Disabling the Startup Dialog	4
Adjusting Your Display Settings	4
Learning the Program	5
Program Basics	5
How to Complete a Project.....	5
How to Use the Tools	5
Advanced Features	5
Online Help.....	5
Troubleshooting Guide	6
Glossary of Terms	6
Technical Support	6
Online Self-Support	6
E-mail Support	6
Telephone Support	6
3D Home Architect Online	7
Broderbund.com	7
Satisfaction Guaranteed	7

Chapter 2: Screen Layout	9
Title Bar	10
Menu Bar	10
Toolbars and Toolbar Tabs	10
Landscape Toolbar.....	10
Terrain Toolbar.....	10
Basic View Control Toolbar.....	10
Zoom and Navigate Toolbar	11
Catalog Panel	11
Status Bar.....	12
Chapter 3: Drawing & Editing Basics	13
Inserting Elements	14
Selecting an Insertion Method for Line-Drawn Elements.....	14
Going into Selection Mode for Editing	14
Disabling Pre-Selection	15
Selecting Elements for Editing	15
Deselecting Elements.....	15
Accessing Edit Tools.....	15
Controlling the View	17
<hr/>	
Chapter 4: 2D and 3D Viewing.....	19
Viewing the 2D Plan.....	20
Viewing a 2D Designer’s View	20
Viewing in 3D.....	21
Zooming In and Out.....	22
Zooming a Selected Area	22
Zooming to Fit the Drawing Area	22
Panning Across a Drawing	22
Changing the Display Mode	22
Chapter 5: View Filter	25
Filtering the Display	26
Displaying/Hiding Landscape Elements.....	26
Displaying/Hiding Building Elements	27
Displaying/Hiding Building Locations.....	28
Displaying/Hiding Text	28
Displaying/Hiding Dimensions.....	28

Displaying/Hiding Electrical Wiring	28
Displaying/Hiding Project Trace Images	29
Selection Filtering.....	29
Making Landscape Elements Selectable or Non-Selectable.....	30
Making Building Elements Selectable or Non-Selectable	30
Making Building Locations Selectable or Non-Selectable	31
Making Text Selectable or Non-Selectable	31
Making Dimensions Selectable or Non-Selectable.....	32
Making Electrical Wiring Selectable or Non-Selectable	32
Making Project Trace Images Selectable or Non-Selectable	32
Site Design	35
<hr/>	
Chapter 6: Starting with a House.....	37
Inserting a House Template	38
A Note About House Templates	38
Opening a Project from Another 3D Home Design Program	39
Chapter 7: Property Lines	41
Defining Your Building Lot.....	42
Defining a Custom Building Lot.....	43
Chapter 8: Terrain Modeling.....	45
Defining the Basic Terrain	46
Creating Hills and Valleys.....	46
Creating Berms and Trenches	47
Creating Plateaus	48
Creating Slopes.....	49
Hardscaping	53
<hr/>	
Chapter 9: Fences & Gates.....	55
Inserting a Fence	56
Stretching a Fence Layout.....	57
Changing the Length of a Fence	57
Creating a Break in a Fence	57
Parts of a Fence.....	57

Table of Contents

Editing the Properties of a Fence	57
Changing the Fencing Material.....	59
Deleting a Fence	59
Inserting a Gate	59
Moving a Gate	60
Flipping a Gate	60
Flipping a Gate’s Swing	60
Editing the Properties of a Gate	60
Deleting a Gate	61
Chapter 10: Decks & Patios	63
Building a Deck with the Deck Tool	64
Moving a Deck.....	64
Rotating a Deck	64
Changing the Direction of Deck Boards	65
Stretching a Deck	65
Reshaping a Deck.....	65
Curving a Deck Edge.....	65
Changing the Height of a Deck.....	65
Editing Deck Post Properties.....	65
Displaying Footings Under Deck Posts	66
Editing the Deck Frame.....	66
Changing the Railing Style	67
Controlling the Display of Deck Railings.....	67
Controlling the Display of Deck Skirting	68
Inserting Openings in a Deck	68
Resizing a Deck Opening	68
Reshaping a Deck Opening	68
Curving a Deck Opening Edge	69
Removing Deck Openings	69
Deleting a Deck	69
Adding Stairs to a Deck	69
Moving Deck Stairs.....	70
Parts of a Staircase	70
Editing the Size of Deck Stairs	70
Controlling the Display of Railings on Deck Stairs	71
Editing Stringers, Risers and Treads	71
Deleting Deck Stairs	72
Creating a Patio	72
Moving a Patio Slab	73
Resizing a Patio Slab.....	73
Reshaping a Patio Slab	73

Rotating a Patio Slab.....	73
Editing the Thickness of a Patio Slab	73
Applying a Different Material to a Patio	74
Deleting a Patio Slab.....	74
Chapter 11: Retaining Walls.....	75
Drawing Retaining Walls.....	76
Editing a Retaining Wall’s Height, Width or Elevation	76
Lengthening and Shortening Retaining Walls.....	76
Rotating a Retaining Wall.....	76
Curving a Retaining Wall	76
Breaking a Retaining Wall	77
Applying Different Finishes to Retaining Walls	77
Deleting a Retaining Wall.....	77
Chapter 12: Sidewalks, Pathways & Driveways	79
Drawing Sidewalks, Pathways and Driveways	80
Stretching a Path Element.....	80
Moving a Path Element.....	81
Editing the Thickness or Width of a Path Element	81
Applying Different Materials to Path Elements.....	81
Deleting a Path Element.....	81
Chapter 13: Exterior Structures	83
Inserting Exterior Structures	84
Moving Exterior Structures	84
Rotating Exterior Structures.....	84
Editing the Size of an Exterior Structure	84
Applying Different Colors or Materials to Exterior Structures.....	84
Deleting an Exterior Structure	85
Chapter 14: Exterior Furniture	87
Inserting Exterior Furniture	88
Moving Exterior Furniture	88
Rotating Exterior Furniture	88
Editing the Size of Exterior Furniture	88
Applying Different Colors or Finishes to Exterior Furniture.....	88
Deleting Exterior Furniture	89

Chapter 15: Exterior Accessories 91

Inserting Exterior Accessories..... 92
Moving Exterior Accessories..... 92
Rotating Exterior Accessories..... 92
Raising or Lowering an Exterior Accessory..... 92
Editing the Size of an Exterior Accessory..... 92
Changing the Look of an Exterior Accessory 93
Deleting an Exterior Accessory..... 93

Chapter 16: Landscape Lighting 95

Inserting Landscape Lighting 96
Moving a Landscape Light Fixture 96
Editing the Size of a Landscape Light Fixture..... 96
Editing a Light Fixture’s Light Source..... 96
Turning a Light On or Off 97
Changing the Look of a Landscape Light Fixture..... 98
Deleting a Landscape Light Fixture 98

Chapter 17: Irrigation 99

Inserting Irrigation..... 100
Moving Sprinklers 100
Rotating Sprinklers..... 100
Editing the Height of a Sprinkler..... 100
Editing a Sprinkler’s Spray Coverage..... 100
Deleting a Sprinkler 100

Plants & Gardens 101

Chapter 18: Garden Beds, Ponds & Other Filled Areas 103

Creating Filled Areas..... 104
Resizing a Filled Area..... 104
Reshaping a Filled Area 104
Rotating a Filled Area..... 105
Moving a Filled Area..... 105
Changing the Fill Material..... 105
Deleting a Filled Area..... 105

Chapter 19: Edging	107
Inserting Edging.....	108
Cleaning Up Corners.....	108
Changing the Length of Edging.....	109
Breaking Edging.....	109
Moving Edging.....	109
Rotating Edging	109
Editing the Height or Width of Edging	110
Changing the Edging Material.....	110
Deleting Edging.....	110
 Chapter 20: Trees, Shrubs & Plants	 111
Inserting Plants.....	112
Moving a Plant	112
Changing the Elevation of a Plant	112
Editing the 2D Appearance of a Plant.....	112
Changing the Age of a Plant	113
Forcing a Custom Plant Size.....	113
Deleting a Plant	114
Seeing Plant Growth Over Time.....	114
Applying Seasonal Changes to Plants	114
Using the Plant Encyclopedia	115
The Encyclopedia Main Page	116
Selecting a Plant to View.....	116
Viewing Plant Information.....	116
Plant Views	117
Plant Care Calendar.....	118
World Map Page	120
Notebook Page	121
Picture Page	122
Diseases Page.....	123
Filtering the Plant List	124
Adding a Plant from the Encyclopedia to the Catalog.....	125
 Drawing & Editing Tools	 127

Chapter 21: Drawing Aids.....	129
Setting Up a Drawing Grid.....	130
Turning the Drawing Grid On and Off	130

Table of Contents

Using the Grid Snap	130
Turning the Grid Snap On and Off	130
Using the Object Snap	130
Using Ortho	131
Using Angle Snap	131
Disabling/Enabling Collision Control.....	131
Chapter 22: Measurement.....	133
Changing the Unit of Measure.....	134
Suppressing Metric Units in Dialogs	134
Measuring Distances	134
Measuring Area and Perimeter.....	135
Chapter 23: Commander	137
Displaying the Commander	138
Using the Commander	138
Displaying the Coordinate Icon.....	138
Specifying the Insertion Height of an Element Before You Insert It	138
Selecting a Reference Point When Inserting and Editing Elements	139
Entering Values in the Commander.....	139
Direction and Angle of Rotation.....	140
Defining Points in the Cartesian Coordinate System	140
Specifying Distance and Direction in the Polar Coordinate System	140
Using the Commander When Rotating Elements	140
Using the Commander When Curving Elements	141
Chapter 24: Editing Your Design.....	143
Undoing the Previous Action.....	144
Redoing an Undo	144
Accessing Edit Commands.....	144
Moving Elements	144
Doing a Straight Drag-and-Drop.....	144
Using the Move Tool	144
Raising or Lowering an Element	145
Rotating Elements in 2D Plan View	145
Doing a Simple, On-the-Spot Rotation	145
Using the Rotate Tool.....	146
Changing an Element's Orientation.....	146
Copying Elements.....	146
Arraying Elements.....	147
Deleting Elements	147

Editing the Size and Composition of an Element 148
 Changing an Element’s Material or Color..... 148

Power Tools **151**

Chapter 25: Photo Boards 153

Importing a Photo Board 154
 Adding an Imported Photo Board to Your Catalog..... 155
 Inserting a Photo Board from the Catalog..... 155
 Moving a Photo Board 155
 Rotating a Photo Board in 2D Plan View 155
 Changing the Elevation of a Photo Board 156
 Changing a Photo Board from Stationary to Rotating and Vice Versa..... 156
 Editing the Size of a Photo Board 156
 Deleting a Photo Board 156
 Creating Transparency in Photo Board Images..... 156

Chapter 26: Text & Dimensions 159

Adding Text to Your Drawing 160
 Moving Text..... 160
 Rotating Text..... 160
 Editing Text Content 160
 Changing the Style of Text..... 161
 Changing the Justification of Multi-line Text 161
 Deleting Text..... 161
 Adding Text with a Leader..... 161
 Moving and Stretching a Leader 162
 Changing the Leader Arrow Style..... 162
 Moving Leader Text 163
 Editing Leader Text 163
 Deleting Text with a Leader 163
 Dimensioning 163
 Setting the Current Dimension Style 163
 Creating Linear Dimensions..... 164
 Creating Aligned Dimensions..... 164
 Moving a Dimension Line 164
 Stretching Dimensions 165
 Changing the Style of a Dimension..... 165
 Deleting a Dimension..... 165
 Dimension Style Properties 166

Table of Contents

Anatomy of a Dimension.....	166
Lines and Arrows.....	166
Dimension Text	166
Line Styles	167
Chapter 27: Project Estimate.....	169
Generating a Project Estimate	170
Opening a Saved Estimate.....	171
Editing Material Pricing.....	171
Chapter 28: 3DTrueView™	173
How 3DTrueView™ Rendering Works.....	174
Setting the Viewpoint for the Scene	174
Setting the Scene.....	174
Defining Your Location and Time of Day	175
Creating a 3DTrueView™ Rendering.....	176
Adjusting the Rendering Quality	176
Changing the Refresh Rate During Lighting Calculations	177
Adjusting the Brightness of the Rendered Image	177
Turning Daylight Off.....	177
Using Antialiasing to Reduce Jagged Edges.....	178
Creating a Fog Effect	178
Creating a Smoke Effect	178
Adjusting the Light Coming from Light Fixtures	178
Editing the Surface Properties of Materials	179
Saving a 3DTrueView™ Rendering to a File	179
Specifying the Output Size of Rendered Images.....	180
Creating Multiple 3DTrueView™ Renderings in the Same Project	180
Managing Files	181
Chapter 29: Opening, Saving & Printing	183
Opening a Saved Project	184
Viewing Sample Plans.....	184
Changing the Number of Files in the Recently Used File List	184
Repairing Damaged Projects	184
Saving Projects.....	185
Setting the Automatic Save.....	185
Specifying a Default Save Directory.....	185

Saving a Project as a Template.....	185
Selecting a Default Project Template.....	186
Disabling the Use of Templates	186
Setting the Path to the Templates Directory	186
Selecting a Directory for Temporary Files.....	187
Closing Projects.....	187
Printing Drawings.....	187
Using Print Setup	188
Chapter 30: Exporting Files.....	189
Exporting Your Model	190
Exporting the Current View.....	190
Customization	191
<hr/>	
Chapter 31: Screen Settings	193
Displaying/Hiding Toolbars	194
Displaying Toolbars in Tabbed Format.....	194
Displaying Toolbars in a Non-tabbed Format.....	194
Changing the Background Color of Toolbars.....	194
Changing the Color of Toolbar Areas.....	194
Moving Toolbars.....	195
Displaying/Hiding the Catalog Panel.....	195
Resizing the Catalog Panel	195
Moving the Catalog Panel	195
Displaying/Hiding the Status Bar.....	196
Changing the Background Color of the Drawing Window.....	196
Hardware Acceleration.....	196
Improving Graphics Display.....	197
Chapter 32: Building Locations	199
Viewing and Defining Building Locations.....	200
Current Building Location.....	200
Location Dimming	201
Making Elements on All Locations Selectable in 2D Plan View	201
Chapter 33: Managing View Windows.....	203
Using the View Manager	204
Creating New View Windows	204

Table of Contents

Turning View Tabs On.....	205
Switching Between View Windows	205
Tiling View Windows.....	205
Cascading View Windows.....	205
Returning to a Maximized View.....	206
Restoring the Previous Arrangement of View Windows	206
Closing View Windows	206
Opening View Windows that You Have Closed.....	206
Renaming a View Window.....	206
Editing the Print Scale of a View	207
Deleting View Windows.....	207
Chapter 34: Custom Viewing	209
Creating New 3D Views	210
Changing a 3D View.....	210
Turning Cameras On and Off	210
Changing Your Viewpoint.....	210
Changing the Camera Height	211
Changing the Target of Your View	211
Changing the Target Height.....	211
Viewing in Perspective Mode	211
Viewing in Parallel Mode	212
Selecting a Preset Camera Angle	212
Changing the Viewing Field Angle.....	213
Walking Around in 3D View	214
Flying Around Your 3D Model.....	214
Sliding in a 3D View	214
Spinning the View Using the Look Around Tool	214
Resetting the Camera in a 3D View.....	215
Selecting a Background for 3D Views.....	215
Viewing Elevations	216
Turning Elevation Marks On and Off.....	216
Moving Elevation Marks	216
Changing the Target of an Elevation	217
Editing Elevation Properties	217
Deleting an Elevation	217
Creating a Custom Elevation	217
Creating a Section View	218
Viewing Section Views.....	218
Turning Section Marks On and Off.....	219
Editing a Section View	219
Editing Section Properties	219

Deleting a Section View	220
Displaying Framing.....	220
Chapter 35: Catalogs & Elements.....	221
Using the Catalog Manager.....	222
Adding a Group to a Catalog.....	222
Renaming a Group in a Catalog	222
Deleting a Group in a Catalog.....	223
Adding and Editing Elements in a Catalog	223
Saving Edited Elements in Your Drawing to a Catalog	224
Importing 3D Studio Files.....	224
Simplifying an Element.....	225
Controlling What Parts of an Element are Displayed	226
Working with Property Pages.....	226
Using Automatic Name Generation.....	227
Editing the Name Generation Formula	227
Basic Page.....	228
Changing an Element’s Orientation.....	228
Appearance Page	228
Quantity Page.....	229
Behavior Page.....	230
Adding Notes to an Element’s Properties	230
Adding Hyperlinks to an Element’s Properties	231
Creating a New Catalog.....	231
Creating a Copy of a Catalog	232
Importing Elements into Catalogs.....	232
Deleting Elements from a Catalog.....	233
Opening a Catalog	233
Closing a Catalog	234
Viewing Catalog Properties.....	234
Chapter 36: Materials, Colors & Patterns.....	235
Things You Should Know About Editing Materials.....	236
Customizing the Materials Library	236
Editing Material Properties	237
Using Textures from Outside Sources	239
Saving Customized Materials to a Materials Library File.....	239
Importing Materials from a Materials Library File.....	240
Specifying the Location of the Textures Directory.....	240
Customizing the Patterns Library	241

Table of Contents

Chapter 37: Line Styles	243
Things You Should Know About Editing Line Styles	244
Customizing the Line Styles Library	244
Saving Line Styles to a Line Styles Library File.....	246
Importing Line Styles from a Line Styles Library File.....	246
Customizing the Linetypes Library	247
Chapter 38: Text & Dimension Styles	249
Customizing the Text Styles Library	250
Saving Customized Text Styles to the Text Styles Library File	251
Importing Text Styles from a Text Styles Library File	252
Customizing the Dimension Styles Library	252
Dimension Style Properties	253
Anatomy of a Dimension.....	253
Lines and Arrows.....	253
Dimension Text	254
Line Styles	255
Saving Customized Dimension Styles to the Dimension Styles Library File.....	255
Importing Dimension Styles from Dimension Styles Library File	255
Chapter 39: Light Sources	257
Things You Should Know About Editing Light Sources	258
Customizing the Light Source Library	258
Saving Customized Light Sources to the Light Source Library File.....	259
Importing Light Sources from a Light Source Library File.....	260
Specifying the Location of the Light Source Directory.....	260
Glossary	263
Catalog Index	269
Index	275

Part 1

The Basics

Welcome page 1

Screen Layout page 9

Drawing & Editing Basics page 13

Welcome

Congratulations on purchasing *3D Home Architect® Landscape Design Deluxe 6!* We guarantee you are going to enjoy creating your dream design projects.

3D Home Architect® Landscape Design is for anyone who wants to create a landscape plan. This high-quality, multi-functional tool is easy to use and delivers the results you want — completely and accurately.

Whether you are just playing around with different design ideas, or preparing drawings for a landscaping professional, *3D Home Architect® Landscape Design* makes it fun and easy.

Possible uses include:

- Garden planning
- Complete landscape design
- 3D visualization
- Photorealistic rendering
- Budget and materials list
- Export to other file formats

Take a few minutes to familiarize yourself with the contents of this guide so you can quickly find the answers you need while working on your project.

Package Contents

Your *3D Home Architect® Landscape Design* package includes the following:

- 3D Home Architect Landscape Design installation CD
- 3D Home Architect Landscape Design User's Guide

System Requirements

In order to run *3D Home Architect® Landscape Design*, your system should include the following:

- Microsoft® Windows® 98SE/2000 SP4/XP SP1/ME
- 500Mhz or higher processor
- 128 MB RAM (256 MB recommended)
- 300MB free hard-disk space (750MB recommended if you are installing the Plant Encyclopedia on your hard drive)
- 4X CD-ROM drive or faster
- Video Card with OpenGL driver and at least 32MB RAM
- Color monitor with 1024x768 resolution or higher
- Mouse
- Microsoft® Internet Explorer 5.5 or higher to view tutorials and access online features (optional).

Important Notes for Previous 3D Home Design Users

If you are using *3D Home Architect Landscape Design Deluxe 6*, you can open drawings from *3D Home Design Suite Professional 5*, *3D Home Architect® 5* and *3D Home Landscape Designer 5*. Drawings from older versions of *3D Home Architect* or *3D Home Landscape Designer* (4.0 or earlier) are not accepted.

If you have projects from version 5 of a *3D Home Design* program and would like to be able to open them in version 6, it is recommended that you make the textures in the older version available in version 6 so that textures will appear properly in version 6. This is because textures in the older version are bitmap (BMP) files, and the textures in

version 6 are JPG files. The JPG format was chosen for version 6 to reduce file size and improve program speed.

If you choose not to back up your old textures, you can still open a version 5 drawing in version 6. However, the drawing will have no textures applied to it when you open it in version 6, and you will have to apply new textures to your elements if you want textures in your drawing.

There are two ways to make textures from version 5 available in version 6:

- Back up your old Textures directory temporarily, then once version 6 is installed, copy the old textures into the new Textures directory of version 6. This method allows you to uninstall version 5 if you want. See *Backing Up Textures from Version 5* on page 2.
- Or, once version 6 is installed, set your Textures path in your program settings to the Textures folder in the older version. With this method you cannot uninstall the old version. Also, when working with new drawings in version 6, materials will not show up in your catalog or when using the Materials Paintbrush unless you switch the path back to the Textures directory of version 6. For more information, see *Specifying the Location of the Textures Directory* on page 240.

Backing Up Textures from Version 5

If you want to uninstall version 5 before installing version 6, and you want to be able to open version 5 drawings in version 6 with all your textures properly applied, you should back up your old textures. If you are not planning to uninstall version 5, backing up your Textures directory is not necessary because they will still be available on your system and can be copied to your new Textures directory.

To back up textures from version 5:

1. Open Windows® Explorer.

2. Locate the Textures directory. (e.g. *C:\Program Files\Broderbund\Broderbund Home Design 5.1\Textures.*)
3. Copy the folder to another location on your system, such as the root (e.g. C: drive).
4. You can now safely uninstall version 5 if you want.

Once you've installed version 6, you can copy the textures in the backed up Textures directory to your new Textures directory. The new directory will then contain textures from both version 5 and version 6. By default, textures are located in the following directory in version 6:

C:\Program Files\3D Home Architect\Landscape Design Deluxe 6\Textures

Uninstalling a Previous Version

Note: If you have projects from version 5 that you would like to open in version 6, see *Important Notes for Previous 3D Home Architect Users* on page 2 before uninstalling.

If you currently have an older *3D Home Design* program installed on your system, you may want to uninstall it before installing *3D Home Architect® Landscape Design Deluxe 6*.

To uninstall a previous version:

1. At your Windows® desktop, select **Start > Settings > Control Panel**.
2. In the *Control Panel* window, double-click the **Add/Remove Programs** icon.
3. In the *Add/Remove Programs* window, select the program to be deleted.
4. Click the **Change/Remove** button.
5. In the *InstallShield Wizard* window, enable the **Remove** radio button.
6. Click **Next**.
7. In the *Confirm Uninstall* window, click **Yes**. The uninstallation begins.
8. Follow any remaining instructions.

How the Uninstallation Works

When you uninstall an older version of the software, all program files, folders and icons are removed **unless** you modified your catalog and/or have projects residing in the program's **Projects** directory. In this case, the old program folder remains on your system with the old **Catalogs** and **Projects** directories in tact.

If you want you can replace the **Catalogs** and **Projects** directories in *3D Home Architect® Landscape Design* with the old directories after you've installed it.

Installing 3D Home Architect® Landscape Design Deluxe 6

To install *3D Home Architect® Landscape Design Deluxe 6*, you need to run Setup. Make sure you exit all other programs, applications and screensavers before installing.

To install the program:

1. Begin at the Windows® desktop.
2. Insert the installation CD into your CD-ROM drive. The *InstallShield Wizard* screen appears and loads the setup.
3. Follow the on-screen instructions to complete the installation.

Note: If the install screen does not appear automatically, you must install the program manually.

To install the program if installation does not begin automatically:

1. Make sure the installation CD is in your CD-ROM drive.
2. At the Windows® desktop, click the **Start** button, then select **Run**.
3. Type **D:\setup.exe** in the **Open** edit box. The letter **D** represents your CD-ROM drive. If you are installing from a different drive, substitute the correct letter for the letter **D**.
4. Click **OK**, then follow the on-screen instructions to complete the installation.

Starting the Program

You can start your program from your Windows® **Start** menu, or by double-clicking the *3D Home Architect® Landscape Design Deluxe 6* icon on your desktop.

Registering the Program

Take a moment to register online when you see the registration window. Once registered you are eligible for technical support, special offers, advance notice of upgrades, and more.

You can also register your software later in one of two ways:

- Select **Start > Programs > 3D Home Architect > Landscape Design Deluxe 6 > Register Online**.
- Click the **Register Online** button in the startup dialog that appears when you start the program.

Starting a New Project

Every time you start the program, a startup dialog appears. This dialog lets you start new drawings, or open saved drawings.




To start a new project, click the **Start a New Project** button in the startup dialog.

If the program is already running, you can start a new project by selecting **File > New** or clicking the New button on the Standard toolbar.

Disabling the Startup Dialog

You can disable the startup dialog that appears when you start the program. If you disable it, the House Builder Wizard will launch when you start the program. If you have disabled the House Builder Wizard, a blank project will open.

To disable the startup dialog:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the General tab.
3. Uncheck the **Enable Startup Dialog** check box.
4. Click **OK**.

Adjusting Your Display Settings

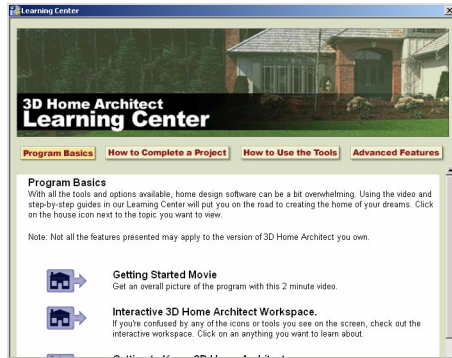
You can control program performance by ensuring your Windows® display settings are set correctly.

To adjust your display settings:

1. From the Windows® **Start** menu, select **Settings > Control Panel**.
2. In the Control Panel window, double-click **Display**.
3. In the **Display Properties** dialog, select the **Settings** tab.
4. From the Color drop box, select **True Color (32 bit)**.
Note: If 32-bit is unavailable, select 24-bit.
5. In the Screen area section, move the slider to display at least 1024 x 768 pixels.
6. Click **OK**.

Learning the Program

3D Home Architect® Landscape Design includes a **Learning Center** that contains a variety of videos and tutorials to help you get started and learn the program. It's a quick, fun and easy, and will get you up and running with your project in no time.



To access the Learning Center:

- When you start the program, click the **Learn to Use** button in the startup dialog, or
- If the program is running, make a selection from the **Learn** menu

Program Basics

The *Program Basics* page contains short videos, tools and guides to help get you up and running with the program.

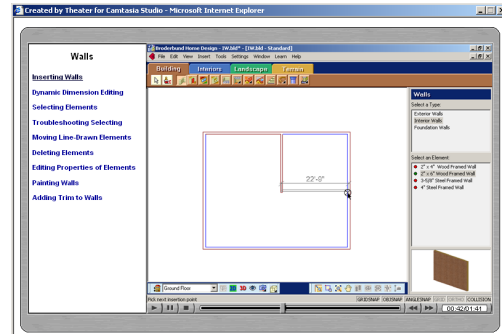
How to Complete a Project

The *How to Complete a Project* page contains project-specific tutorials that you can read and print out. Examples include:

- Completing a Landscape Design
- Adding a Deck

How to Use the Tools

The *How to Use the Tools* page lets you select a specific tool — anything from exterior furniture to slopes, and view narrated videos on how to insert, edit and troubleshoot the element, and more.



Advanced Features

The *Advanced Features* page offers insider's tips and instructions on performing more difficult tasks in the program. Choose from the following step-by-step guides:

- Everything You Ever Wanted to Know About Plants
- Getting the Most Out of the Plant Encyclopedia
- Terrain Modeling

Online Help

3D Home Architect® Landscape Design includes a comprehensive online help system that includes all of the information found in this User's Guide. You can browse through all help topics, or get help for a specific element, tool or dialog while you are designing.

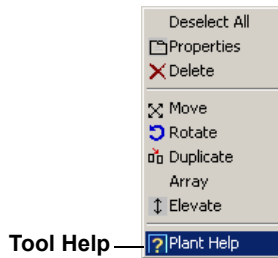
To access the online help file:

- Select **Help > Program Help**, or
- Press **F1**, or
- Click the Program Help button on the Standard toolbar



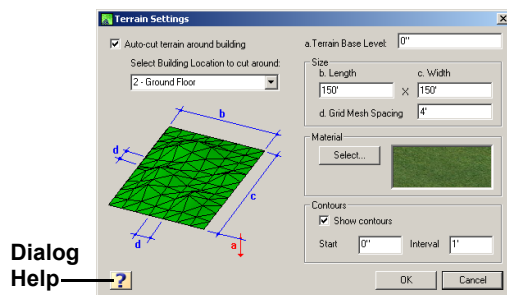
To get help for a specific part of your drawing:

1. Select the element you want help with.
2. Right-click and select the Tool Help option for that element (e.g. Plants Help). Help for the element is displayed. You can also access the Tool Help from the **Edit > Modify Elements** menu.



To get help in a dialog:

1. Click the Dialog Help button in the dialog. A window is displayed that describes the content of the dialog.



Troubleshooting Guide

3D Home Architect® Landscape Design's help tools include a Troubleshooting Guide that describes common problems in the program and how to solve them.

To access the Troubleshooting Guide:

1. Select **Help > Troubleshooting Guide**.

Glossary of Terms

You can instantly access a glossary of terms from the Help menu.

To view the Glossary of Terms:

1. Select **Help > Glossary of Terms**.

Technical Support

Our online technical support system offers 24-hour service and product information.

The online Support Center provides access to Online Self-Support, and lists contact information for E-mail Support and Telephone Support.

Online Self-Support

You can access troubleshooting guides, FAQs and downloads for 3D Home Architect® Landscape Design 24 hours a day, 7 days a week.

To access free online software help:

1. Select **Help > Online Software Help**.
2. On the contact page, click the **Online Self-Support** link.

E-mail Support

You can contact technical support by e-mail provided you have registered your software and received a User Name and Password.

To contact technical support by e-mail:

1. Select **Help > Online Software Help**.
2. On the contact page, click the **E-mail Support** link.
3. On the Customer Support Login page, enter your User Name and Password. If you have not yet registered your software, you can do so from the Customer Support Login page.

Telephone Support

If you contact technical support by telephone, be prepared to provide information about your computer name and model, and the brand name of the video card and sound card you are using, and a detailed description of your issue. We

provide a form on our web site for your convenience. If possible, sit at your computer with the program running when you call.

To prepare for your call:

1. Select **Help > Online Software Help**.
2. On the contact page, click the **Telephone Support** link.
3. Fill out the *Technical Support Contact Form*.
4. Click **Print** to print the form.
5. Have the form with you when you call.

Note: If you want to submit your technical support contact form to technical support by e-mail, click the **Send E-mail** button at the bottom of the form.

To contact technical support by telephone:

1. Call **(319) 247-3333** during the following hours: Monday, Tuesday, Thursday, Friday 8:00 AM - 5:00 PM CST & Wednesday 9:00 AM - 5:00 PM CST

Note: Though technical support does not charge for support calls, this is a toll call that will be billed to your long distance carrier. Average hold times during peak periods can exceed 20 minutes.

3D Home Architect Online

The 3D Home Architect product page on our web site offers additional help, content and services related to the program.

To access the 3D Home Architect page:

1. Select **Help > 3D Home Architect Online**.

Broderbund.com

Visit the Broderbund® web site to view a complete listing of Broderbund products and services.

To instantly access the Broderbund web site:

1. Select **Help > Broderbund.com**, or go to <http://www.broderbund.com> in your Internet browser.

Satisfaction Guaranteed

If you are not completely satisfied with this product, Broderbund® will gladly exchange it for another title of equivalent value or refund your purchase price. Return the complete package to us at:

**Broderbund
Dock Door # 9
120 Hidden Lake Circle
Duncan, SC 29334
U.S.A.**

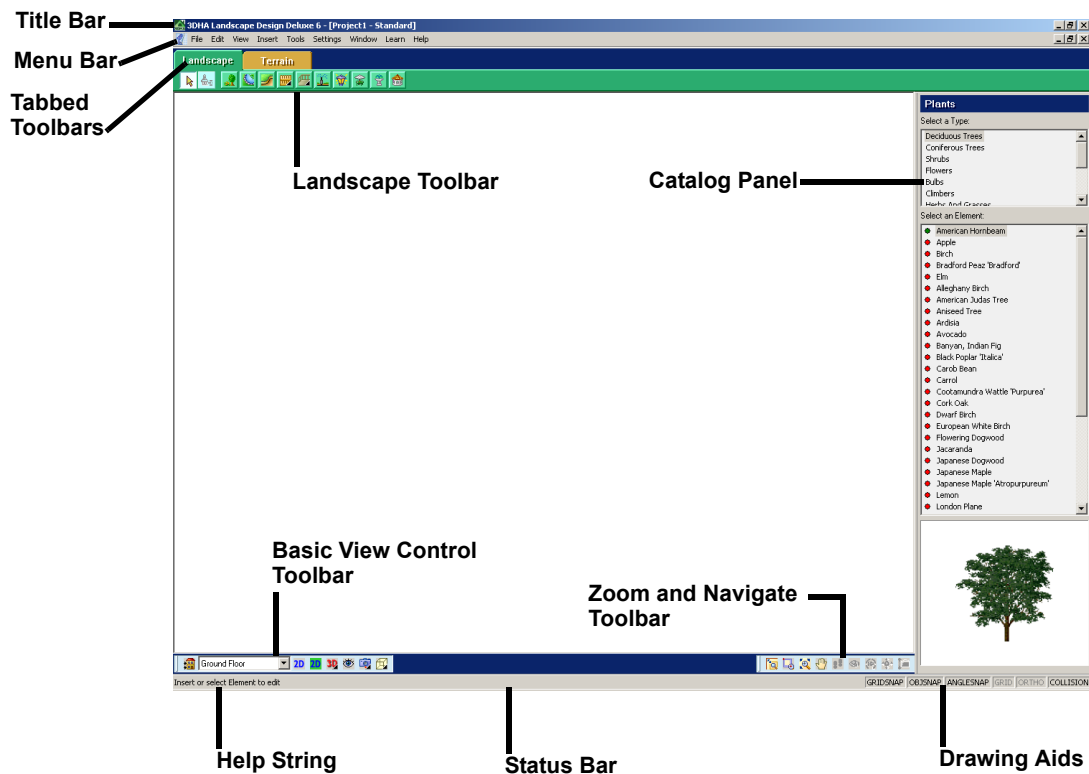
Make sure you include your store receipt showing the store name and location within 30 days of purchase. Please enclose an explanation for the return and specify the replacement title. Allow 4–6 weeks for refund or replacement title. Limit 1 per household. Dealers, wholesalers and their immediate families are not eligible.

Written inquires should be addressed to our corporate address at:

**Broderbund
500 Redwood Boulevard
Novato, CA 94947
U.S.A.**

Screen Layout

The *3D Home Architect® Landscape Design* screen contains a variety of user-friendly features that make it easy to create precise landscape plans. This chapter describes everything you see on the screen so you can become familiar and comfortable with your work environment.



Title Bar

The title bar runs across the top of the screen. It displays the name of your program, the name of the current project, and the name of the current view.

You can minimize, maximize, restore or close the application window using the buttons at the right end of the title bar, or by clicking the Control menu button at the left end of the title bar. You can also maximize or restore the window by double-clicking the title bar. If the application window is not maximized, you can move the entire window around on your desktop by dragging the title bar.

Menu Bar

The menu bar is located directly below the title bar. You can select menu items using either the mouse or keyboard.

To use the mouse, simply click a menu name, then select an item from the menu that pops down. Menu items that have an arrow to the right display cascading menus when you place your pointer over them. When you highlight a menu item, a brief description is displayed on the status bar.

To use the keyboard, press the ALT key and type the underlined letter in the menu name, then type the underlined letter in the menu item name. If the menu item has a cascading menu, you need to type an additional letter. You can also use the arrow keys on your keyboard to move through menu items and press ENTER to select one. You can use the ESC key to back out of the menu items one level at a time.

Toolbars and Toolbar Tabs

By default, two tabs are located just beneath the menu bar: Landscape and Terrain. These are actually toolbars displayed in tabbed format.

The view in the drawing window does not change when you switch to a different tab. The tabs simply provide you with instant access to the specific toolbars you need, when you need them.

In addition to the two toolbar tabs, there are two free-standing toolbars displayed just below the drawing area: Basic View Control and Zoom and Navigate. Free-standing toolbars can be moved around on the screen. There are more toolbars available for display in your program settings. Each one can be displayed in tabbed or non-tabbed format — the choice is yours.

Note that you still have access to a complete set of Insert features on the **Insert** menu regardless of what tab you are on.

Landscape Toolbar

The Landscape toolbar contains all the tools you need to create a complete landscape plan for the exterior of your home. Tools include Plants, Fences/Gates, Decks, and Irrigation.



Terrain Toolbar

The Terrain toolbar contains tools that you can use to design a realistic terrain for your model, which is especially important in 3D views. Tools include Hills/Valleys, Slopes, Paths, Retaining Walls, and Site Boundary.



Basic View Control Toolbar

The Basic View Control toolbar contains several essential view-related tools. It lets you quickly switch between 2D view and 3D view, as well as access the View Filter. A display mode button lets you choose the current display type for the view (wireframe, hidden line, etc.).



If you have opened a drawing from another 3D Home Design product which contains a house model, the building locations drop box displays a list of the locations used by that drawing.

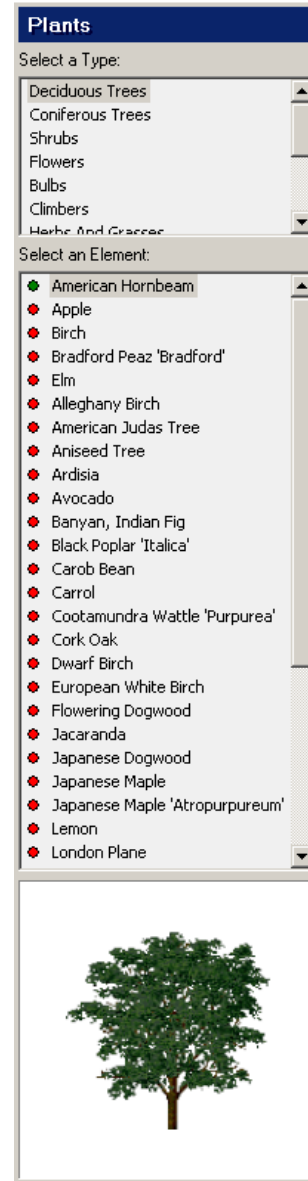
Zoom and Navigate Toolbar

Zoom tools on the Zoom and Navigate toolbar include Zoom Realtime, Zoom Window, and Pan. Note that if you are in a 3D Perspective view, only the Zoom Realtime zoom tool is available. The navigation features on the toolbar (Walk Around, Fly Around, Look Around, Slide) are only active when you are in a 3D view. These tools let you change the view in real time using your mouse.



Catalog Panel

The catalog panel, located on the right side of the screen, displays the elements contained in the program's Master Catalog, or whatever catalog is currently open. This is where you select elements to insert into your drawing.



Chapter 2 Screen Layout

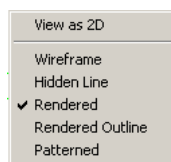
The content of the catalog panel changes depending on which Insert tool is currently selected, or was last selected. For example, if you select the Plants tool, you will see plants displayed in the catalog panel.

The top window of the catalog panel displays a list of groups specific to the current element type. For example, if Plants is the current tool, you will see groups such as Deciduous Trees, Shrubs and Flowers.

The middle window of the catalog panel displays all the element types available in the currently selected group. For example, if the Deciduous Trees group is currently selected, you will see a list of deciduous trees in the element window.

The lower window of the catalog panel displays a 3D rendered preview of the currently selected element. You can rotate the image around by clicking and dragging with your mouse. Note, however, that the preview is for viewing purposes only within the catalog panel. The orientation of the element in the preview window has no effect on the orientation of the element when you insert it in your plan. You can change an element's orientation after you have inserted it in the plan.

You can also right-click in the preview window and select a different display mode for the image, or switch the preview to a 2D plan view.



Status Bar

The Status bar is located at the bottom of the screen. It displays helpful prompts while you are working on your design project. For example, if you are inserting a retaining wall, it may display *"Pick first insertion point"*. The Status bar also includes a selection of drawing aid buttons such as ORTHO and OBJSNAP.

Chapter 3

Drawing & Editing Basics

Everything is point-and-click in *3D Home Architect® Landscape Design*, making it extremely simple to use and leaving you free to be as creative as you like.

While working on your project, you will probably want to edit it as you go. You can select elements by clicking on them, or by drawing a selection window around them.

This chapter describes the basics of inserting elements, and selecting them for editing.

Inserting Elements

When you select a tool from the **Insert** menu or one of the insertion toolbars, you are in Insertion mode. To insert an element, you select it in the catalog panel, then click in your drawing area.

Many elements can be inserted with a single mouse click. *Single-click* elements include plants, furniture and accessories. *Line-drawn* elements, like retaining walls and edging, require that you select two points to define the element's start point and end point. The points you pick determine the element's length and angle. *Area-drawn* elements, such as pads, fills and plateaus, are drawn by picking a series of points to define their outline.

In many cases, on-screen dimensions are displayed as you draw, making it easy to create line-drawn and area-drawn elements at the correct length or size.

Once you insert an element in your drawing area, you can:

- Continue inserting the same element
- Select a different element in the catalog to insert
- Right-click and select **Finish** to end the command and return to Selection mode

Tip: When an Insert tool is active, double-clicking inserts the element and finishes the command at the same time. Note, however, that double-clicking after you've already inserted an element will, in most cases, insert another element.

Tip: If you are in Selection mode, you can insert any element currently accessible in the catalog by clicking the desired element in the catalog and dragging your pointer into the drawing area.


Note: If you don't see the exact element you want to insert in the catalog, you can create custom elements to suit your needs. See *Adding and Editing Elements in a Catalog* on page 223.

Selecting an Insertion Method for Line-Drawn Elements

Some elements, like retaining walls and edging, are drawn by picking two or more points. By default, line-drawn elements use the **Pick and drag** insertion method. With this method, you keep the mouse button depressed after clicking the first point, drag the mouse to draw the element, then release your mouse button to select the next point.

If you prefer to pick points without dragging, you can select the **Pick Points** insertion method. With this method you do not have to keep your mouse button depressed to draw the element (i.e. you do not have to click and drag the mouse). Once you've selected the first point, you can simply move your mouse in the direction you want the element to run, then click to select the next point.

To select an insertion method for line-drawn elements:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the *Insertion Method* area, select either **Pick Points** or **Pick and drag**.
4. Click **OK**.

Going into Selection Mode for Editing

When you have finished using an insertion tool, either by double-clicking or selecting **Finish** from the right-click menu, you automatically go into Selection mode. When in Selection mode, you can select elements in your drawing area and edit them.


You can also go into Selection mode by clicking the Select/Edit button on any insertion toolbar, or by selecting **Select/Edit** from the **Edit** menu.



Disabling Pre-Selection

When pre-selection is turned on, elements highlight when you hover your cursor over them. Tooltips are also displayed that tell you what the elements are as they are highlighted. By default, pre-selection is enabled. On some systems, disabling pre-selection can help improve program speed.

To disable pre-selection:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the *Visual Aids* area, uncheck the **Enable Pre-Selection** check box.
4. Click **OK**.

Selecting Elements for Editing

When in Selection Mode, you can select elements for editing. You can select individual elements, a group of elements, or all elements.

When an element is selected, it is highlighted in a different color (usually light green). One or more handles are also displayed on the element.

If you are having trouble selecting the element you want, you may want to use the View Filter to make other elements non-selectable. This makes selection of the element much easier. See *Selection Filtering* on page 29.

To select a single element:

1. Click on the element.

To select multiple elements by clicking:

1. Click the first element you want to select.
2. Hold down the **Shift** key and click on the rest of the elements you want to select. The most recent selection is green and prior selections are blue.

To select a group of elements by creating a selection window:

1. Going from either left to right, or right to left, drag a selection window around the elements you want to select. Any elements touching the selection window will be selected (they do not need to be totally enclosed).

To select all elements:

1. Select **Edit > Select All**.

To re-select the elements you last selected:

1. Select **Edit > Select Previous**.

Deselecting Elements

When you select elements, you can remove individual elements from your selection set. You can also deselect everything that is currently selected.

To deselect individual elements:

1. Hold down your **Shift** key.
2. Click the element you want to deselect.

To deselect everything in your selection set:

1. Select **Edit > Deselect All**, or right-click in the drawing area and select **Deselect All**, or simply click in a blank spot somewhere else in the drawing area.

Accessing Edit Tools

Most elements can be moved once they are selected by simply clicking and dragging them. Some can also be stretched or rotated. You can access a full menu of edit tools by right-clicking in the drawing area, or by selecting **Edit > Modify Elements**.

Menus vary depending on the element selected. Typical tools are Properties, Move, Rotate, Duplicate, and Delete. If two types of elements are selected, only tools that are common to both element types are available.

Each chapter includes editing instructions specific to the contents of that chapter. For information about general editing, see *Editing Your Design* on page 143.

Part 2

Controlling the View

2D and 3D Viewing

page 19

View Filter

page 25

Chapter 4

2D and 3D Viewing

3D Home Architect® Landscape Design offers a variety of options for viewing your design in 2D and 3D.

When working in 2D plan view, you can magnify or reduce the view using the Zoom Realtime tool. You can also magnify a selected area using the Zoom Window tool. The Zoom to Fit tool magnifies your design so it fills the drawing area, creating the largest view possible. The Pan tool lets you pan the view in any direction by simply clicking and dragging.

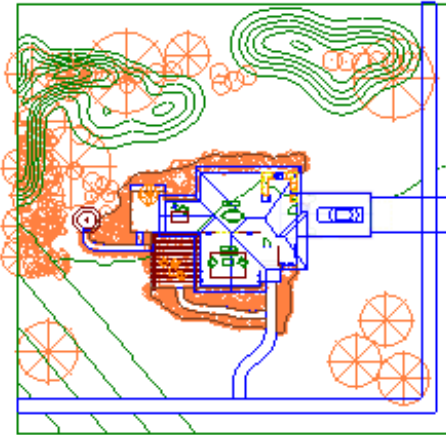
You can instantly switch to 3D view with a couple of mouse clicks. You can choose from the realistic 3D Perspective view, which is like viewing your design from a distance, or 3D Overview, which eliminates distance from the view and lets you see the design from above.

While viewing in 3D you can choose from a variety of display types, including Wireframe, Patterned and Rendered.

This chapter describes all basic 2D and 3D viewing features. For information about advanced viewing features, see page 209.

Viewing the 2D Plan

When you start a drawing, the default view is a 2D plan view. It shows your design in a "flat" view, as if you were looking at it from above. 2D plan view is ideal for inserting and arranging elements in your plan.



To display your model in 2D plan view:

- Select **View > 2D Plan View**, or
- Click the 2D Plan View button on the Basic View Control or Advanced View Control toolbar, or
- Right-click in the drawing area and select **2D Plan View**

2D

You can control which elements are displayed by using the View Filter. See *Filtering the Display* on page 26.

While in 2D plan view you can zoom in and out, and pan your drawing.

Viewing a 2D Designer's View

By default, your design is displayed in a wireframe 2D plan view. You can use the 2D Designer's View tool to quickly display a rendered version of the 2D plan view. In a rendered view, materials are applied to the elements and terrain, creating a more realistic view.



To view a 2D Designer's View:

1. Select **View > 2D Designer's View**, or click the 2D Designer's View button on the Basic View Control or Advanced View Control toolbar.

2D

Viewing in 3D

You can instantly switch to 3D view by selecting either the 3D Perspective or 3D Overview tool.

In a 3D Perspective view, the scale of an element decreases according to its distance from the viewer, creating a more real-world view.



To view a 3D perspective view:

1. Select **View > 3D Model View > 3D Perspective**, or click the 3D Model View button on the Basic View Control or Advanced View Control toolbar and select **3D Perspective**.

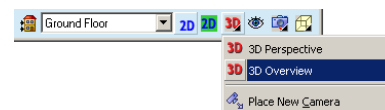


The 3D Overview is an orthographic view, where the view is set from a common angle, and distance is eliminated from the view. This creates an instant close-up of your design.



To view a 3D overview:

1. Select **View > 3D Model View > 3D Overview**, or click the 3D Model View button on the Basic View Control or Advanced View Control toolbar and select **3D Overview**.




Tip: If you have your cameras turned on in 2D, you can switch to a 3D view by selecting a camera, right-clicking it, then selecting **Look Through**.

Note: By default, 3D views are displayed in Rendered mode. For information about changing the display mode, see *Changing the Display Mode* on page 22. For information about moving around in a 3D view, or creating or customizing 3D views, see *Custom Viewing* on page 209.

Zooming In and Out

The Zoom Realtime tool continuously magnifies or shrinks the view as you click and drag with your mouse. You can zoom in and out in 2D plan view or any 3D view.

To zoom in and out:


1. Select **View > Zoom and Navigate > Zoom Realtime**, or click the Zoom Realtime button on the Zoom and Navigate toolbar. 
2. To zoom in, click and drag toward the top of the screen. To zoom out, click and drag toward the bottom of the screen.
3. When the view is the desired size, release your mouse button.

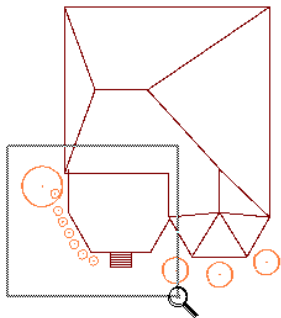
Tip: You can also zoom in and out using the scroll button on your mouse.

Zooming a Selected Area

Using the Zoom Window tool you can magnify a particular area of your design by drawing a selection window around it.

To zoom a selected area:

1. Select **View > Zoom and Navigate > Zoom Window**, or click the Zoom Window button on the Zoom and Navigate toolbar. Your cursor becomes a magnifying glass. 
2. Click and drag a selection window around the area you want to magnify.




Note: The Zoom Window tool is not available in 3D perspective views.

Zooming to Fit the Drawing Area

The Zoom to Fit tool instantly extends your drawing to the edges of the drawing area. This ensures your entire drawing is visible at the most maximized view possible, and makes full use of the drawing area.

To zoom the drawing to fit the drawing area:

1. Select **View > Zoom and Navigate > Zoom to Fit**, or click the Zoom to Fit button on the Zoom and Navigate toolbar. 


Note that the terrain is considered part of your drawing. If you want to zoom just your design to fit the drawing area, you need to turn the terrain off before using Zoom to Fit.

Note: The Zoom to Fit tool is not available in 3D perspective views.

Panning Across a Drawing

Using the Pan tool you can move the current view of your design to bring a particular part of your design into view. This is especially useful when the area you want to view is currently not visible because you have zoomed in on your drawing.

To pan the current view:

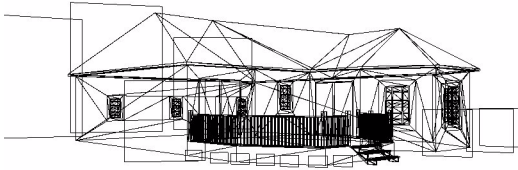
1. Select **View > Zoom and Navigate > Pan**, or click the Pan button on the Zoom and Navigate toolbar. 
2. Click in the drawing.
3. Hold your mouse button down.
4. Drag the view in the direction you want to pan.
5. Release the mouse button.

Note: The Pan tool is not available in 3D perspective views.

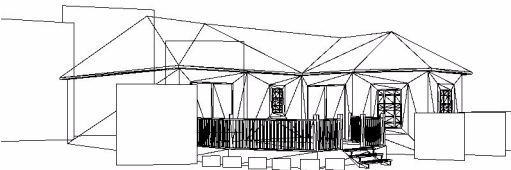
Changing the Display Mode

By default, your design is displayed in Wireframe mode when you are in 2D plan view. When you switch to a 3D view, the default display mode is Rendered mode. There are five display modes you can choose from.

Wireframe. Each line in your design is visible, creating a “see-through” view.



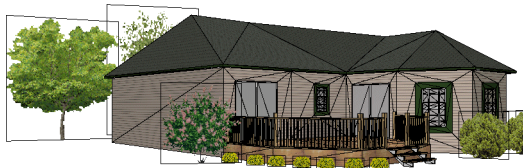
Hidden Line. Removes lines from the view that you would normally not see, creating an opaque view.



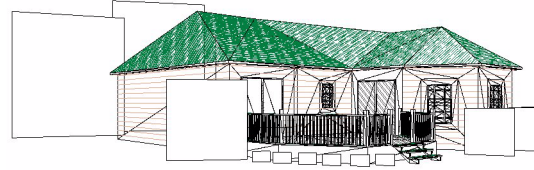
Rendered. Applies materials to the elements and terrain, creating a very realistic view.



Rendered Outline. Applies materials to the elements and terrain, and outlines surface edges in a single, dark line for increased surface definition.



Patterned. Applies patterns of lines (hatching) to the surfaces of elements.



To view Wireframe mode:

- Select **View > Display Mode > Wireframe**, or
- Click the Display Mode button on the Basic View Control or Advanced View Control toolbar and select **Wireframe**

To view Hidden Line mode:

- Select **View > Display Mode > Hidden Line**, or
- Click the Display Mode button on the Basic View Control or Advanced View Control toolbar and select **Hidden Line**

To view Rendered mode:

- Select **View > Display Mode > Rendered**, or
- Click the Display Mode button on the Basic View Control or Advanced View Control toolbar and select **Rendered**

To view Rendered Outline mode:

- Select **View > Display Mode > Rendered Outline**, or
- Click the Display Mode button on the Basic View Control or Advanced View Control toolbar and select **Rendered Outline**

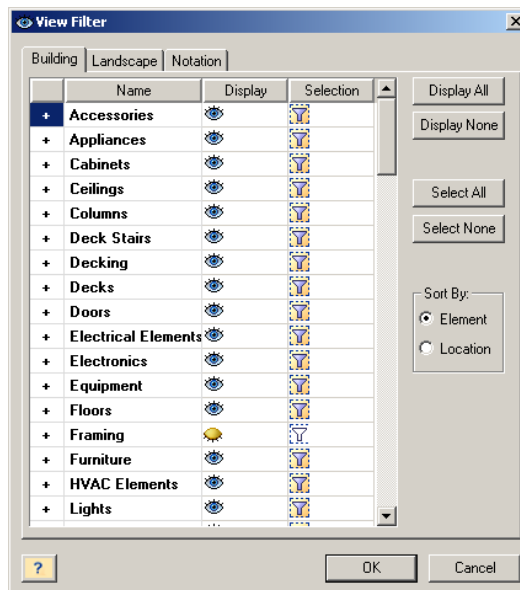
To view Patterned mode:

- Select **View > Display Mode > Patterned**, or
- Click the Display Mode button on the Basic View Control or Advanced View Control toolbar and select **Patterned**

Chapter 5

View Filter

The program's unique View Filter feature lets you decide which elements you want displayed at any given time. It also lets you make selected elements non-selectable, which is sometimes necessary when trying to select a particular element in your drawing.



Filtering the Display

The View Filter provides precise control over what elements are displayed in a view at any given time.

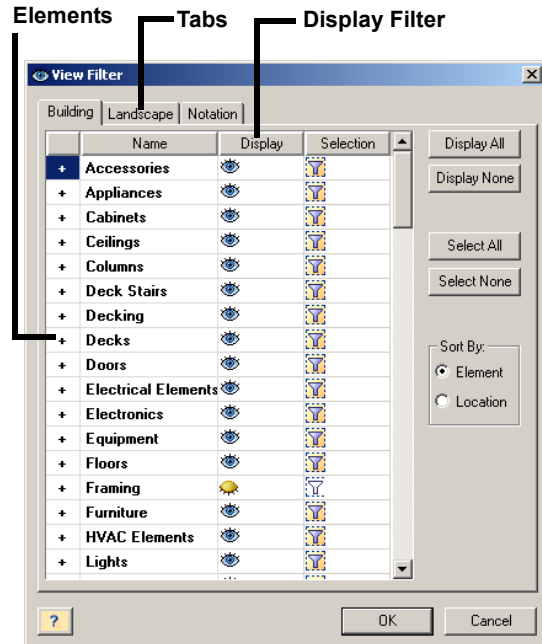
You can display/hide:

- selected or all landscaping elements
- text and dimension elements
- an entire location, or multiple locations (if your project contains a house drawn in another 3D Home Design program)
- building elements on a specific location or multiple locations

Note: Using the View Filter does not delete elements from your drawing. It just hides them from view.

To access the View Filter:

- Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.



The **View Filter** dialog contains three tabs: Building, Landscape and Notation. The Building tab lists all building element types related to architectural models drawn in other *3D Home Design* programs. If you expand an element, a list of building locations is displayed below the element name. If you choose to sort by location, a list of building locations is displayed with a list of elements under each one. The Landscape tab contains a list of exterior landscaping elements, and the Notation tab contains text, dimensions, project trace images, and electrical wiring.

The icons in the *Display* column indicate whether or not that location or element is currently displayed. Clicking an icon toggles the icon to the opposite state (on or off).

Location or element is turned on

Location or element is turned off

If sorting by element on the Building tab, this means that the element is displayed on some locations and not on others. If sorting by location, it means that some elements on the location are displayed and some are not.

Clicking **Display All** turns on all locations and elements on the current tab. Clicking **Display None** turns off all locations and elements on the current tab.

The **View Filter** dialog also lets you control whether or not individual locations and elements can be selected. See *Selection Filtering* on page 29.

Displaying/Hiding Landscape Elements

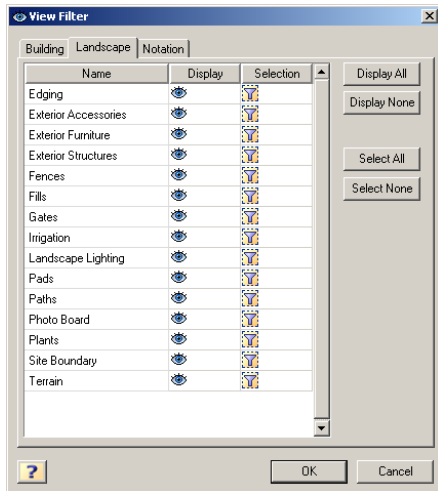
Landscape elements include things like the terrain, site boundary, paths and plants. Using the View Filter you can display or hide selected landscape element types.

To filter landscape elements:

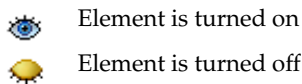
1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.



2. In the **View Filter** dialog, select the Landscape tab. A list of landscape elements is displayed.



3. Click the eye icons in the *Display* column to turn elements on or off.




4. Click **OK**.

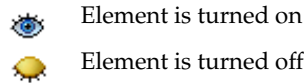
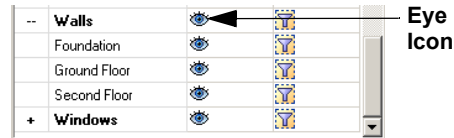
Displaying/Hiding Building Elements

Building elements are things like walls, doors and windows - things that make up an architectural model. Using the View Filter you can display or hide selected element types on all or selected building locations if you have opened a drawing from another *3D Home Design* program which contains a model.

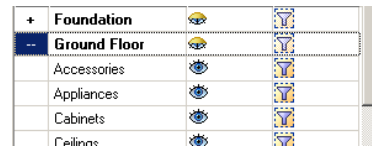
To display or hide building elements:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 
2. In the **View Filter** dialog, select the Building tab.
3. In the *Sort By* area, make sure the **Element** radio button is selected.

4. If you want to change the visibility of an element on all locations, click the element's eye icon in the *Display* column. If you want to filter an element on a specific location, click the element's plus sign (+) to display a list of building locations. Then, click the location's eye icon in the *Display* column.



You can also filter elements by location. If you enable the **Location** radio button in the *Sort By* area, a list of building locations is displayed. You can then expand the location you want to filter elements on to display a list of elements. Toggling the eye icons of elements in this list filters elements on the selected location.




If you want to make all elements on all locations visible, click the **Display All** button. If you want to make all elements on all locations non-visible, click **Display None**.

5. Once you've selected what you want to filter, click **OK**.

Displaying/Hiding Building Locations



If you have opened a drawing from another 3D Home Design program which contains a model, you can turn individual locations on or off. When you turn a location off, all building elements on that location are hidden from view.

To display or hide entire locations:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 
2. In the **View Filter** dialog, select the Building tab.
3. In the *Sort By* area, enable the **Location** radio button. A list of building locations is displayed in the window.



4. Click the eye icon next to the name of the location you want to display or hide.


 Location is turned on
 Location is turned off

5. Click **OK**.

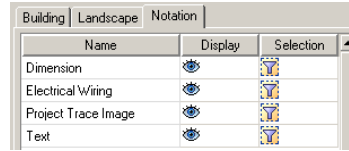
Displaying/Hiding Text

Using the View Filter you can display or hide text in your drawing.



To filter text from view:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 

2. In the **View Filter** dialog, select the Notation tab.



3. In the **Text** row, click the eye icon in the *Display* column to turn text on or off.


 Text is turned on
 Text is turned off

4. Click **OK**.

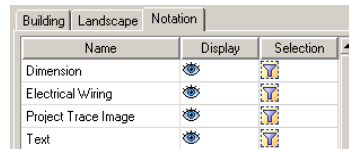
Displaying/Hiding Dimensions

Using the View Filter you can display or hide dimensions in your drawing.



To filter dimensions from view:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 

2. In the **View Filter** dialog, select the Notation tab.



3. In the **Dimension** row, click the eye icon in the *Display* column to turn dimensions on or off.

 Dimensions are turned on
 Dimensions are turned off


4. Click **OK**.

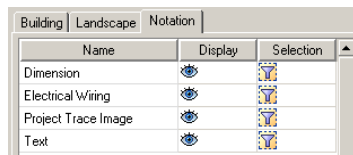
Displaying/Hiding Electrical Wiring

If you have opened a drawing from another 3D Home Design program which contains a model with electrical wiring, you can use the View Filter



to display or hide electrical wiring in your drawing.

To filter electrical wiring from view:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 
2. In the **View Filter** dialog, select the Notation tab.



3. In the **Electrical Wiring** row, click the eye icon in the *Display* column to turn wiring on or off.


-  Wiring is turned on
-  Wiring is turned off

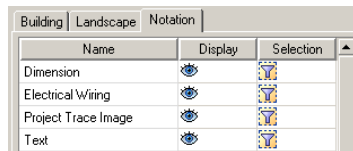
4. Click **OK**.

Displaying/Hiding Project Trace Images



If you have opened a drawing from another 3D Home Design program which contains a project trace image, you can hide the image if you want using the View Filter. This is an alternative to deleting the image.

To filter project trace images from view:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 
2. In the **View Filter** dialog, select the Notation tab.



3. In the **Project Trace Image** row, click the eye icon in the *Display* column to turn wiring on or off.

-  Project trace image is turned on
-  Project trace image is turned off

4. Click **OK**.

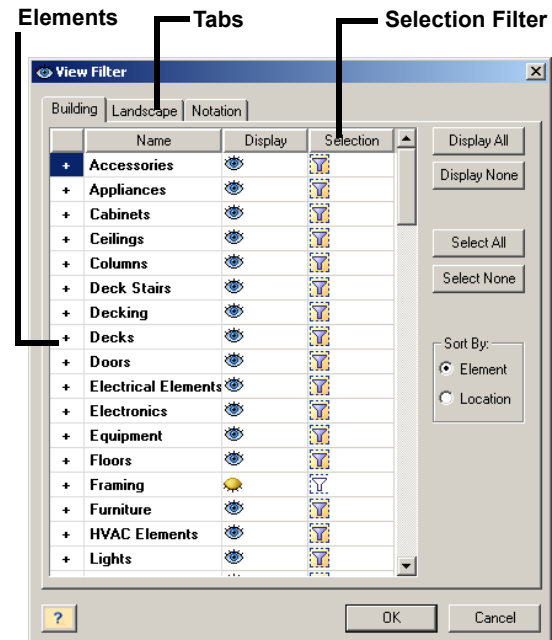
Selection Filtering

When your model contains a number of elements, it can sometimes be difficult to select certain ones because of proximity or overlapping edges. If you have inserted a house template, for example, it can sometimes be difficult to select landscaping elements that you have inserted near it.

You can use the View Filter to stop certain elements from being selected.

To access the View Filter:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 



The **View Filter** dialog contains three tabs: Building, Landscape and Notation. The Building tab lists all building element types related to architectural models drawn in other *3D Home Design* programs. When you expand an element, all of your building locations are listed below the element. The Landscape tab contains a list of exterior landscaping elements, and the Notation tab contains text, dimensions, project trace images, and electrical wiring.

The icons in the *Selection* column indicate whether or not that location or element is currently selectable. Clicking an icon toggles the icon to the opposite state (selectable or non-selectable).



Element or location is selectable



Element or location is not selectable

Making Landscape Elements Selectable or Non-Selectable

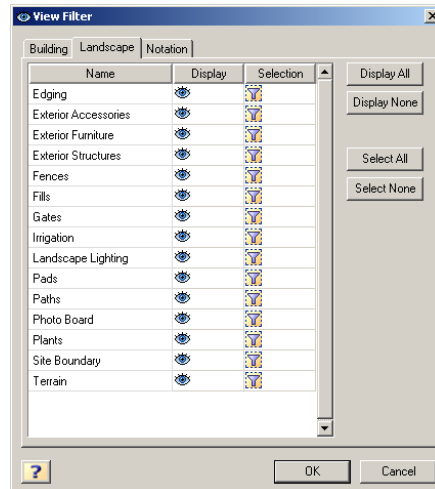
Landscape elements include things like the terrain, site boundary, paths and plants. Using the View Filter you can make selected landscape element types selectable or non-selectable.

To make landscape elements selectable or non-selectable:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.



2. In the **View Filter** dialog, select the Landscape tab. A list of landscape elements is displayed.



3. Click the filter icons in the Selection column to toggle selectability on or off.



Element is selectable



Element is not selectable

4. If you want to make all landscape elements selectable, click the **Select All** button. If you want to make all landscape elements non-selectable, click **Select None**.
5. Click **OK**.

Making Building Elements Selectable or Non-Selectable

Building elements are things like walls, doors and windows - things that make up an architectural model. Using the View Filter you can make individual element types selectable or non-selectable on all or selected building locations.

To change the selectability of building elements:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.



- In the **View Filter** dialog, select the Building tab.
- In the *Sort By* area, make sure the **Element** radio button is selected.
- If you want to change the selectability of an element on all locations, click the element's filter icon in the *Selection* column. If you want to filter an element on a specific location, click the element's plus sign (+) to display a list of building locations. Then, click the location's filter icon in the *Selection* column.

--	Walls			Filter Icon
	Foundation			
	Ground Floor			
	Second Floor			
+	Windows			

Element is selectable

Element is not selectable

You can also filter elements by location. If you enable the **Location** radio button in the *Sort By* area, a list of building locations is displayed. You can then expand the location you want to filter elements on to display a list of elements. Toggling the filter icons of elements in this list filters elements on the selected location.

+	Foundation		
-	Ground Floor		
	Accessories		
	Appliances		
	Cabinets		
	Columns		

If you want to make all elements on all locations selectable, click the **Select All** button. If you want to make all elements on all locations non-selectable, click **Select None**.

- Once you've selected what you want to filter, click **OK**.

Making Building Locations Selectable or Non-Selectable

When you make a location non-selectable, no elements on that location can be selected in any view.

To make a location selectable or non-selectable:

- Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.
- In the **View Filter** dialog, select the Building tab.
- In the *Sort By* area, enable the **Location** radio button. A list of building locations is displayed in the window.

Building	Landscape	Notation
Name	Display	Selection
+ Foundation		
+ Ground Floor		
+ Second Floor		

- Click the filter icon next to the name of the location you want to make selectable or non-selectable.

Location is selectable

Location is not selectable

If you want to make all locations selectable, click the **Select All** button. If you want to make all locations non-selectable, click **Select None**.

- Once you've made your selections, click **OK**.

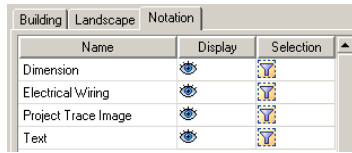
Making Text Selectable or Non-Selectable

Using the View Filter you can make text selectable or non-selectable.

To make text selectable or non-selectable:

- Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.

- In the **View Filter** dialog, select the Notation tab.



- In the **Text** row, click the filter icon in the *Selection* column to toggle selectability on or off.



Text is selectable




Text is not selectable

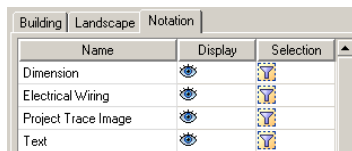
- Click **OK**.

Making Dimensions Selectable or Non-Selectable

Using the View Filter you can make dimensions selectable or non-selectable.

To make dimensions selectable or non-selectable:

- Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 
- In the **View Filter** dialog, select the Notation tab.



- In the **Dimension** row, click the filter icon in the *Selection* column to toggle selectability on or off.



Dimensions are selectable




Dimensions are not selectable

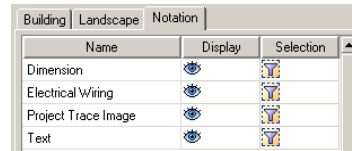
- Click **OK**.

Making Electrical Wiring Selectable or Non-Selectable

Using the View Filter you can make electrical wiring selectable or non-selectable. Electrical wiring can be found in models that were drawn in other *3D Home Design* programs.

To make electrical wiring selectable or non-selectable:

- Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 
- In the **View Filter** dialog, select the Notation tab.



- In the **Electrical Wiring** row, click the filter icon in the *Selection* column to toggle selectability on or off.



Wiring is selectable




Wiring is not selectable

- Click **OK**.

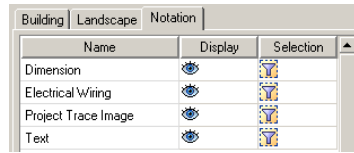
Making Project Trace Images Selectable or Non-Selectable

You can use the View Filter to make project trace images selectable or non-selectable. Project trace images can be found in drawings from other *3D Home Design* programs.


To make project trace images selectable or non-selectable:

- Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar. 

2. In the **View Filter** dialog, select the Notation tab.



3. In the **Project Trace Image** row, click the filter icon in the *Selection* column to toggle selectability on or off.

 Project trace image is selectable

 Project trace image is not selectable

4. Click **OK**.

Part 3

Site Design

Starting with a House page 37

Terrain Modeling page 45

Property Lines page 41

Starting with a House

There are many different ways you can start your landscape plan. One of the first things you may want to do is create a focal point in your plan, such as a house, and insert landscaping around it. *3D Home Architect® Landscape Design's* catalog contains a wide selection of house templates for you to insert. If you have a drawing from another *3D Home Design* program which contains a house, you can open it in *3D Home Architect® Landscape Design*, then use the landscaping tools to add landscaping around it.

If you don't want to include a house in your landscape plan, you can begin by inserting any element you want using a tool from the Insert menu or Landscape toolbar. You can also recreate the topography of your lot using tools from the Terrain toolbar.

Inserting a House Template

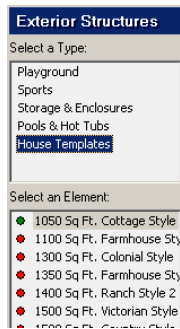
A house template is basically the exterior shell of a finished home. If you are creating a landscape plan, you can insert a house template to serve as the focal point of your plan. You can choose from a wide selection of house templates to insert. Once inserted, you can move and rotate the template, as well as edit its size and appearance.

To insert a house template:

1. Select **Insert > Exterior Structures**, or click the Exterior Structures button on the Landscape toolbar.



2. In the catalog, select the House Templates group, then select the template you want to insert.



3. Without dragging, move your pointer into the drawing area.

4. Position the template where you want it, then click to insert it.

5. Right-click and select **Finish**.

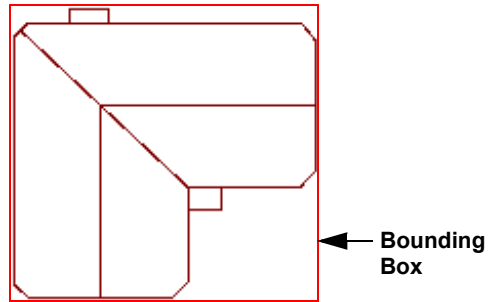
Note: For information about moving, rotating or editing the properties of a house template, see the Exterior Structures chapter on page 83.

A Note About House Templates

House templates are an excellent starting point for any landscape design. Although a house template looks like a real house, it can't be edited like a real model can. It is considered a single-click element, so clicking on any part of the template selects the entire house.

It is important to note that when you select the house template, the invisible bounding box

always square or rectangular, and does not necessarily follow the shape of the house outline.



This can interfere with the selection of other elements near the house. If you have inserted elements around the house, such as plants, and want to select them, you may want to use the View Filter to make the house template non-selectable for ease of editing your landscape plan.

Another thing to note is that the house template's exterior walls are not visible in 2D. You only see the roof line. If you want to insert things like fills up against the exterior walls of the house, you will need to either draw them in 3D, or draw them in 2D and then move them into place in 3D.

To make a house template non-selectable:

1. Select **View > View Filter** or click the View Filter button on the Basic View Control or Advanced View Control toolbar.
2. In the **View Filter** dialog, select the Landscape tab.
3. Click the selection filter icon next to the **Exterior Structures** item.



Selection Filter icon

4. Click **OK**.

Opening a Project from Another 3D Home Design Program


If you have drawn a house in another *3D Home Design* program, you can open that drawing in *3D Home Architect® Landscape Design*. You can open any BLD file created in any of the following programs:

- 3D Home Architect® 5
- 3D Home Architect® Home Design 6
- 3D Home Design Suite 5
- 3D Home Architect® Design Suite 6

If the startup dialog is on your screen, just click **Open a Saved Project**, then select the project to open.

If the program is already running, you can open a saved project using the Open tool.

To open a project if the program is already running:

1. Select **File > Open**, or click the Open button on the Standard toolbar. 
2. In the **Open** dialog, navigate to the location where you saved the project.
3. Select the project to open, then click **Open**.

Note: You can also open drawings from *3D Home Landscape Designer 5*.

Property Lines

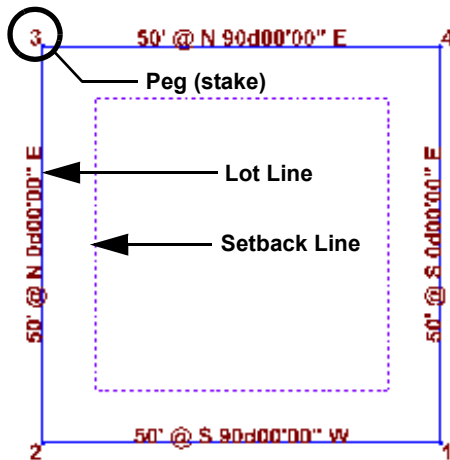
You may want to know where your property lines are, especially if you are working in a confined or unusually-shaped area. Lot lines and setbacks can be found on a survey plan or surveyor's certificate.

Using the Site Boundary tool you can define and insert a site boundary, which shows your property lines, stakes, and building setbacks.



Defining Your Building Lot



You can use the Site Boundary tool to insert a site boundary in your 2D plan. A site boundary consists of two continuous lines: one that shows the legal property boundary (lot lines), and one that defines the building envelope (setbacks). The site boundary can be annotated with peg markers, bearing text, length text and peg numbers. It will only appear in 2D wireframe view.



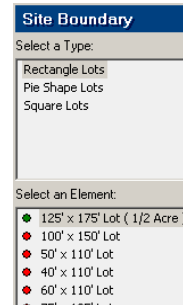
The catalog contains some pre-defined site boundaries that you can edit to suit your needs. You can also create a new site boundary element from scratch if you prefer.

Note: Site boundaries are visible in 2D plan view only.

To insert a site boundary:

1. In 2D plan view, select **View > Zoom and Navigate > Zoom to Fit**, or click the Zoom to Fit button on the Basic View Control or Advanced View Control toolbar. This will bring the entire terrain into view so you can insert the boundary easily and precisely. 
2. Select **Insert > Terrain > Site Boundary**, or click the Site Boundary button on the Terrain toolbar. 


3. In the catalog, select the boundary you want to insert. If you want to create a custom site boundary, right-click the lot that is closest to the one you want to create, then select **Catalog Manager**. See *Defining a Custom Building Lot* on page 43. You can also insert a lot for now and edit it later if you want.



4. Position the boundary where you want it, then click to insert it.
5. Right-click and select **Finish**.

Tip: You can put a fence along your lot lines to show where the lot lines are in 3D. See *Inserting a Fence* on page 56.

To move the site boundary:

1. Click on one of your lot lines to select the entire site boundary. A blue grab handle is displayed at the center of the site boundary.
2. Hover your pointer over the center blue grab handle to display the Move cursor. 
3. Click and drag to move the boundary, then release your mouse button.

To edit the site boundary:

1. Click on one of your lot lines to select the entire site boundary.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Make your changes in the **Site Boundary** dialog, then click **OK**. For more information about site boundary properties, see *Defining a Custom Building Lot* on page 43.

To delete the site boundary:

1. Click on one of your lot lines to select the entire site boundary.

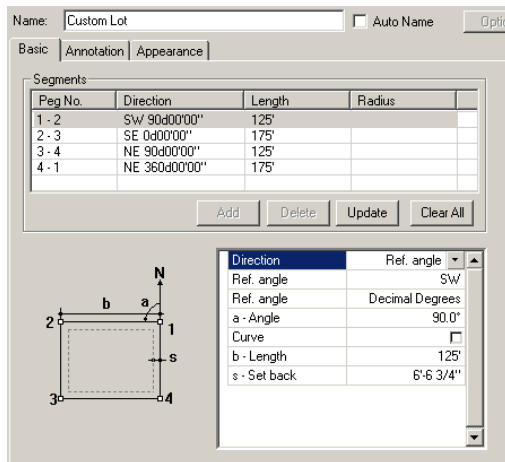
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Defining a Custom Building Lot

If the building lot you want to insert is not available in the catalog, you can create a custom one on the fly. Defining a site boundary involves entering a bearing and length from one peg to the next. This information can be found on a survey plan or surveyor's certificate.

To define a custom building lot:

1. If you haven't already accessed the Catalog Manager, select **File > Catalogs > Catalog Manager**.
2. In the **Catalog Manager**, make sure **Site Boundary** is selected in the *Element* drop box.
3. In the *Select a Type* window, select the group you want to add the site boundary to (Rectangle Lots, Pie Shape Lots or Square Lots). If your boundary has an unusual shape, you may want to create a new group for it.
4. Select **Catalog > Add Element**.

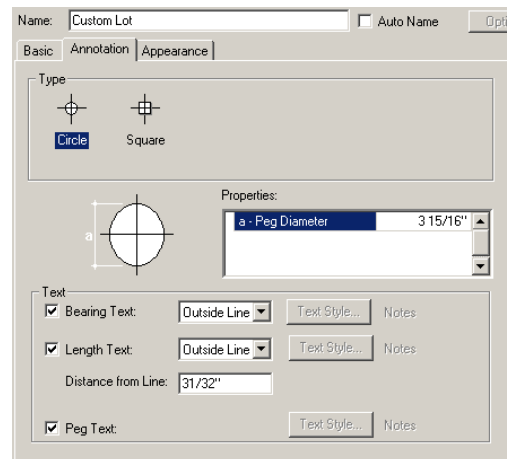


5. In the **Site Boundary** dialog, click **Clear All**.
6. Type a name for your boundary in the *Name* edit box.

7. On the Basic property page, click the **Direction** drop box, then select the method you want to use to define your lot lines.

The **Ref. angle** option lets you define lot lines using compass points (N, S, E, W) and specifying a reference angle in degrees, minutes and seconds (e.g. 5d12'10"). The **Angle bearing** option lets you use angles to specify a forward and back bearing.

8. Define your first lot line by filling in the fields in the parameters window, then clicking **Add**. The line appears in the preview window, and its properties appear in the *Segments* window.
9. Continue defining lot lines. When you are ready to define the last lot line, just check the **Closing** check box, then click **Add**. This closes the last line created back to the first line.
 - To edit an existing lot line, select it in the upper window, edit its parameters in the lower window, then click **Update**.
 - To delete a lot line, select it in the upper window, then click **Delete**.
 - To delete all existing lot lines, click **Clear All**.
10. Once you've defined the size and shape of the site boundary, select the **Annotation** tab in the **Site Boundary** dialog.



11. Specify the desired annotation settings. You can choose round or square peg markers, and specify the marker's diameter. You can also choose to include bearing text, length text and peg text (numbers), as well as specify the position and style for the text.

83'-4" @ N 90d00'00" E

12. Once your lot lines are defined, click **OK**. The boundary is added to the current catalog.
13. Click **OK**. You can now insert the boundary in your drawing.

Terrain Modeling

3D Home Architect® Landscape Design goes well beyond home design by letting you recreate the topography of the lot your home will be built on.

By default, a basic 150' x 150' grass terrain is displayed in the drawing area. In 2D view, only the boundary of the terrain is shown (you may need to zoom out to see it). Contour lines may also be visible depending on the terrain's defined properties. In 3D view, the terrain is displayed as a solid, 3D object. It can be viewed in wireframe, hidden line or rendered form. You add hills, berms, plateaus and slopes to your terrain to create an incredibly realistic-looking building site.



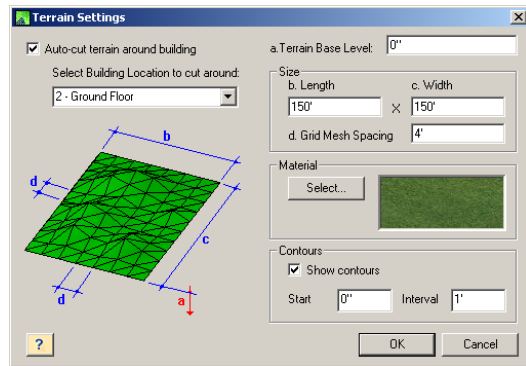
Defining the Basic Terrain

You can control the base level, size (length and width), mesh spacing, and contour interval of the terrain. You can also select a texture to use when displaying the terrain in rendered view (the default is grass).

You can specify whether or not you want the terrain to cut around your building, and select the location that you want the terrain to cut around.

To define the terrain:

1. Select **Settings > Terrain Settings**, or click the Terrain Settings button on the Settings toolbar.



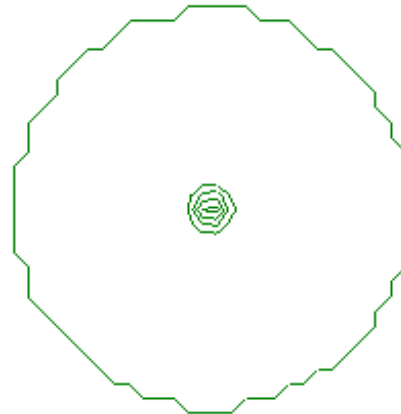
2. In the **Terrain Settings** dialog, set your terrain options:
3. To force the terrain to cut around a building, enable the **Auto-cut terrain around building** check box, then select the building location that you want the terrain to cut around from the **Select Building Location to cut around** drop box.
4. To change the level at which the base of the terrain sits, type the desired value in the **Terrain Base Level** edit box. This value is measured from 0.
5. To change the overall size of the terrain, enter the desired values in the **Length** and **Width** edit boxes.
6. To change the spacing between mesh lines (when viewing the terrain in Wireframe, Hidden Line or Patterned view), enter the

desired value in the **Grid Mesh Spacing** edit box.

7. To change the texture used for the terrain, click the **Select** button in the Material area, then make your selection in the **Materials** dialog.
8. To display contours on your terrain, enable the **Show contours** check box. In the **Start** edit box, enter the elevation of the first contour. In the **Interval** check box, enter the desired spacing between contours.
9. Click **OK**.

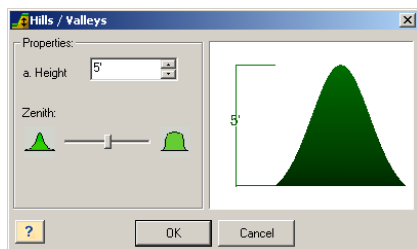
Creating Hills and Valleys

You can add hills to your terrain with a single mouse click. You can control the height of a hill as well as its peak shape. Generally, the diameter of the hill base is the same as the hill height. You can insert multiple hills together to create one larger hill. Also, if you insert hills next to other terrain elements, like plateaus or slopes, the elements will automatically blend together.



To create a hill or valley:

1. Select **Insert > Terrain > Hills / Valleys**, or click the Hills/Valleys button on the Terrain toolbar.



2. In the **Hills / Valleys** dialog, specify the height of the hill in the **Height** edit box. Entering a negative value will create a valley.
3. Using the **Zenith** slider control, select a peak shape for the hill.
4. Click **OK**.
5. Click to insert the hill. You can insert multiple hills if you like.
6. Right-click and select **Finish**.

To move a hill/valley:

1. Click in the center of the hill to select it.
2. Click and drag the center grab handle to move the hill, then release your mouse button.

To edit the height or peak shape of a hill:

1. Click in the center of the hill to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the properties in the **Hills/Valleys** dialog.
4. Click **OK**.

To remove a hill/valley:

1. Click in the center of the hill to select it.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Creating Berms and Trenches

A berm is a mound or bank of soil without formal sides. You often see large berms on the sides of highways, which are used for noise control. On a reduced scale, a natural berm can provide some interesting benefits in a backyard landscape. These include:

Climate control. Berms act as windbreaks, channeling air flow. Berms can create a warmer microclimate or direct cooling breezes.

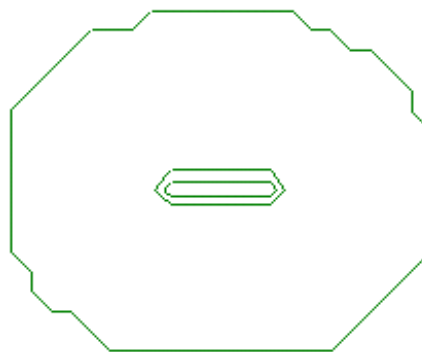
Privacy. A berm can be a "friendly fence" in the back yard or between your house and a sidewalk.

Vertical interest. You can add variety and texture to your gardens with berms, change the view from your outdoor sitting areas, or even hide eyesores with them.

Noise control. A berm can cut down on traffic noise if you live on a busy street or near a schoolyard.

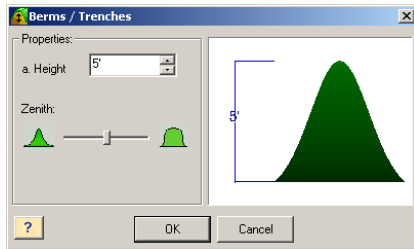
Berms may be shored with stone, bricks, or timbers, and planted with groundcovers, perennials, annuals, trees, etc.

You can control the height of a berm as well as its peak shape.

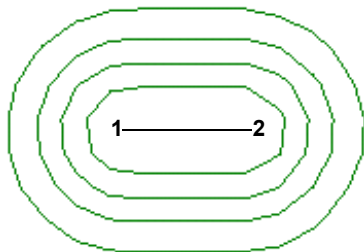


To create a berm/trench:

1. Select **Insert > Terrain > Berms/Trenches**, or click the Berms/Trenches button on the Terrain toolbar.



2. In the **Berms/Trenches** dialog, specify the height of the berm in the **Height** edit box. Entering a negative value creates a trench.
3. Using the **Zenith** slider control, select a peak shape for the berm.
4. Click **OK**.
5. Select two points to define the length of the top of the berm. The berm will be created downward and outward from this line.



6. Right-click and select **Finish**.

To stretch a berm/trench:

1. Click in the center of the berm to select it.
2. Grab handles are displayed at either end of the berm's central line.
3. Click and drag an end grab handle to stretch the berm, then release your mouse button. You can move the end point to any position on the screen.

To move a berm/trench:

1. Click in the center of the berm to select it. A blue grab handle is displayed in the middle of the berm's central line.
2. Click and drag the central blue grab handle to move the berm, then release your mouse button.

To rotate a berm/trench:

1. Click in the center of the berm to select it. Grab handles are displayed along the berm's central line.
2. Click and drag a grab handle to rotate the berm around the selected point.
3. Release your mouse button.

To edit the height or peak shape of a berm:

1. Click in the center of the berm to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the properties in the **Berms/Trenches** dialog.
4. Click **OK**.

To delete a berm/trench:

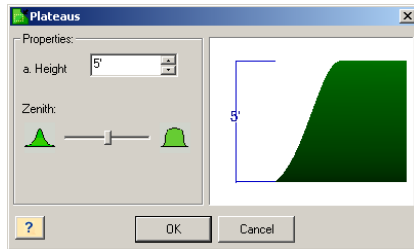
1. Click in the center of the berm to select it.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Creating Plateaus

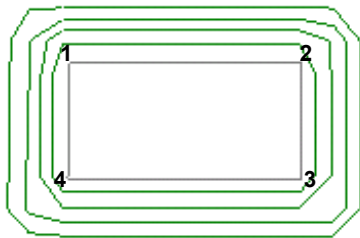
A plateau is a relatively large, flat area of land situated above the adjacent land. Adding a plateau to your terrain involves clicking a few points to define the shape of the plateau. You can control the height of the plateau as well as its peak shape. Note that if you insert a plateau in close proximity to other terrain elements, such as hills, the elements automatically blend together.

To create a plateau:

1. Select **Insert > Terrain > Plateaus**, or click the Plateaus button on the Terrain toolbar.



2. In the **Plateaus** dialog, specify the height of the plateau in the **Height** edit box. Entering a negative value creates an excavated area.
3. Using the **Zenith** slider control, select a general shape for the plateau. The pointier the shape, the steeper the sides will be.
4. Click **OK**.
5. In the drawing area, select points to define the outline of the top of the plateau. Note that the last point picked always closes back to the start point, so you don't have to pick the start point again. The plateau will be created downward and outward from your outline.



6. Right-click and select **Finish**.

To stretch a plateau:

1. Click in the center of the plateau to select it.
2. Click on the edge of the central outline that you want to stretch. A blue grab handle is displayed on the selected edge.
3. Click and drag the edge to stretch the plateau, then release your mouse button.

To reshape a plateau:

1. Click in the center of the plateau to select it. Corner grab handles are displayed on the central outline of the plateau.
2. Click and drag a corner grab handle to stretch the shape, then release your mouse button.

To move a plateau:

1. Click in the center of the plateau to select it.
2. Right-click and select **Move Whole Element**, or select **Edit > Modify Elements > Move Whole Element**.
3. Click and drag to move the plateau, then release your mouse button.

To edit the height or peak shape of a plateau:

1. Click in the center of the plateau to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the properties in the **Plateaus** dialog.
4. Click **OK**.

To delete a plateau:

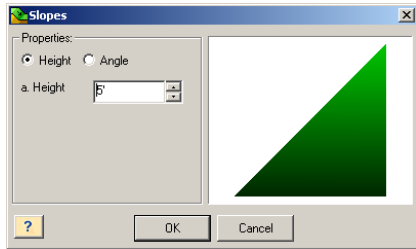
1. Click in the center of the plateau to select it.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Creating Slopes

A slope is an area of land with a natural incline. It is often common practise to slope the land away from the sides of a house so that water drains away from it rather than towards it. When you create a slope, you select two points: the first point is the starting point of the slope, and the second point determines the length and direction of the slope. If the slope comes into contact with other terrain elements, like hills and plateaus, the elements automatically blend together.

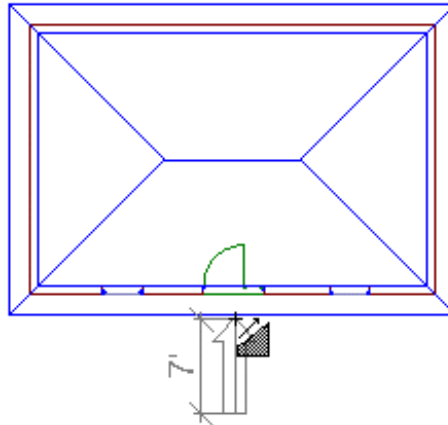
To create a slope in your terrain:

1. Select **Insert > Terrain > Slopes**, or click the Slopes button on the Terrain toolbar.

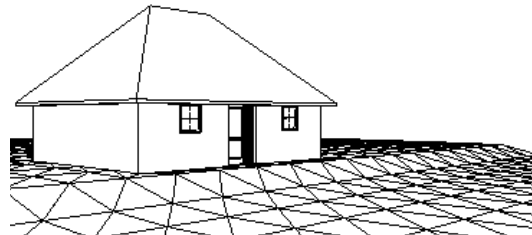


2. In the **Slopes** dialog, enable the **Height** button.
3. In the **Height** edit box, enter the desired height for the top of the slope. Note that slopes are built from the top surface of the terrain up.
4. Enable the **Angle** button.
5. In the **Angle** edit box, enter an angle (in degrees) for the slope. The higher the value, the steeper the slope.
6. Click **OK**.
7. Select a start point for the slope. The slope will incline from this point. Note that the sides of the slope will extend to the very edges of the terrain.

8. Move your cursor in the direction you want the slope to run. A stretchable arrow is displayed.



9. When the arrow is pointing in the right direction and is the desired length, click to insert the slope. The longer the arrow, the more gradual the slope will be. A shorter arrow will result in a steeper slope. Note that if the point you pick is not on the edge of the terrain, the land will level off at the top of the slope.



10. Right-click and select **Finish**.

Note: If you insert another slope, and that slope comes into contact with an existing slope, the new slope will insert on top of the existing slope.

To stretch a slope:

1. Click in the center of the slope. The central arrow is displayed, and grab handles are displayed at either end of it.
2. Click and drag an end grab handle to stretch the arrow, then release your mouse button.

Note that you can also rotate the arrow by selecting a different position for it while clicking and dragging. This changes the direction of the slope.

To move a slope:

1. Click in the center of the slope. The central arrow is displayed.
2. Click and drag the arrow's center blue grab handle to move the slope, then release your mouse button.

To edit the height of a slope:

1. Click in the center of the slope to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Slopes** dialog, enable the **Height** radio button.
4. Edit the height in the **Height** edit box.
5. Click **OK**.

To edit the angle (steepness) of a slope:

1. Click in the center of the slope to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Slopes** dialog, enable the **Angle** radio button.
4. Edit the height in the **Angle** edit box.
5. Click **OK**.

To delete a slope:

1. Click in the center of the slope to select it. The central arrow is displayed.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Part 4

Hardscaping

Fences & Gates	page 55
Decks & Patios	page 63
Retaining Walls	page 75
Sidewalks, Pathways & Driveways	page 79
Exterior Structures	page 83
Exterior Furniture	page 87
Exterior Accessories	page 91
Landscape Lighting	page 95
Irrigation	page 99

Chapter 9

Fences & Gates

Fences can add beauty, privacy and security to your property. Fences are drawn with ease in *3D Home Architect® Landscape Design*. Just point and click to fence off a yard in seconds!

The catalog contains an assortment of fences in a variety of materials, including concrete, stone and wood. You can even add a white picket fence for that classic look.

Once you've drawn your fence you can easily pop a gate into it. You can choose a style that matches your fence, or choose an entirely different style to create a stylish accent.



Inserting a Fence

To insert a fence, you draw it just like a wall by selecting a start point and end point. This allows you to create a fence of any length. You can continue selecting points in other directions to add on to the fencing (if you want to fence around your yard, for example).

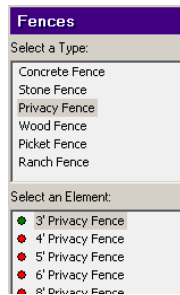
Tip: If you have inserted a site boundary in your plan, you can draw your fence on top of the lot lines for ease. The fence then acts as a visual indicator of your property extents in 3D.

To insert a fence:

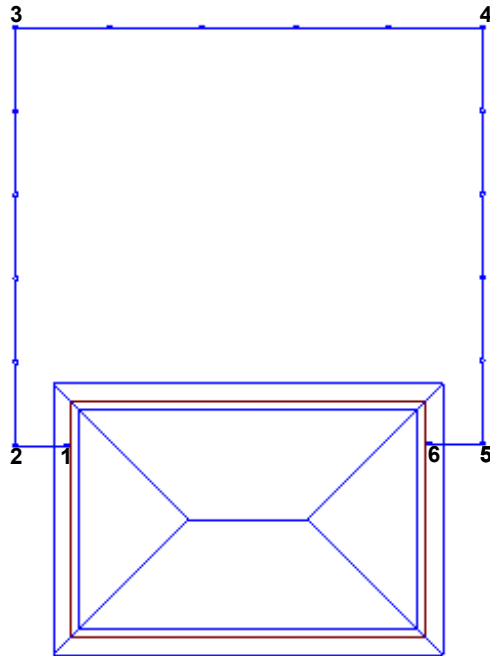
1. Select **Insert > Fences/Gates > Fences**, or click the Fences/Gates button on the Landscape toolbar and select **Fences**.



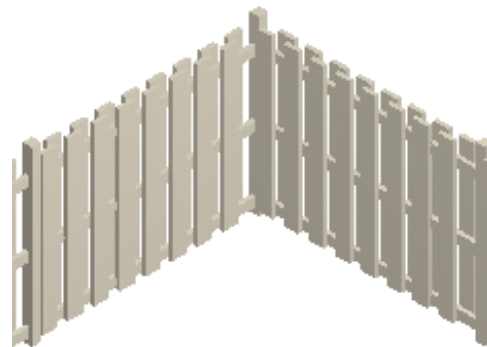
2. In the catalog, select the fence type you want to insert.
3. Select a start point for the fence.
4. Move your cursor in the direction you want the fence to run. The fence stretches as you move your cursor.



5. Select an end point for the fence. If you want you can continue adding sections to the fence in any direction by simply selecting points.



6. Right-click and select **Finish**.



Stretching a Fence Layout

You can stretch a fence layout by clicking and dragging one of the fence segments.

To stretch a fence layout:

1. Click on the fence segment you want to move.
2. Position your pointer over the center blue grab handle to display the Move cursor.
3. Click and drag to stretch the layout, then release your mouse button.



Changing the Length of a Fence

You can lengthen or shorten a fence by clicking and dragging its end points.

To change the length of a fence:

1. Select the fence you want to lengthen or shorten.
2. Click and drag one of the fence's end handles to stretch the fence, then release your mouse button.

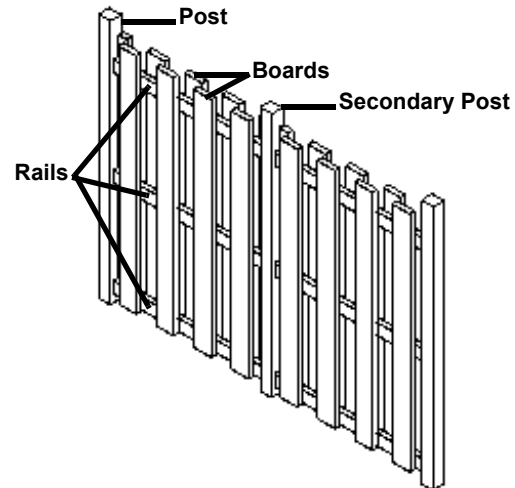
Creating a Break in a Fence

When you create a break in a fence, you can select the fence portions on either side of the break independently. You may want to insert one or more breaks in a fence so that you can then remove certain segments of it.

To create a break in a fence:

1. Select the fence you want to break.
2. Right-click and select **Break**, or select **Edit > Modify Elements > Break**.
3. Double-click where you want to break the fence.

Parts of a Fence

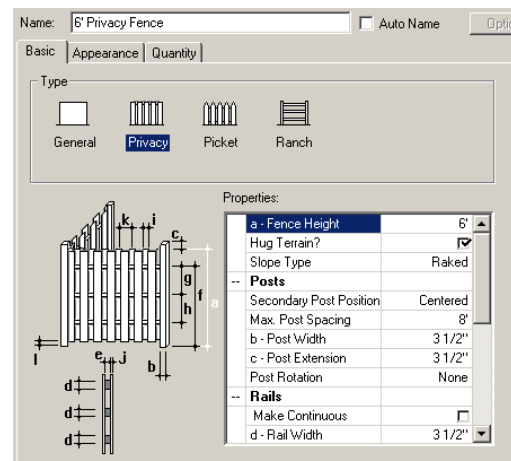


Editing the Properties of a Fence

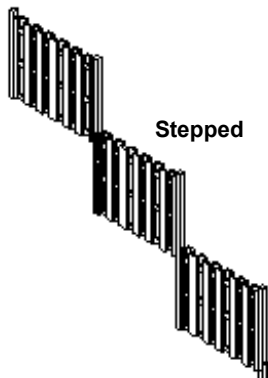
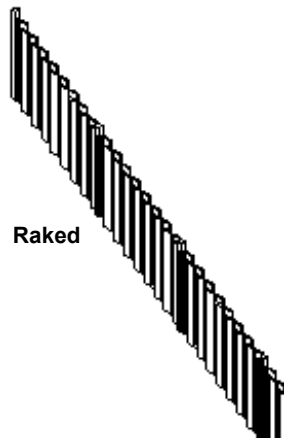
You can change the height of a fence, specify whether or not you want the fence to hug the terrain, edit the size and position of fence posts, and edit the dimensions of the rails and boards.

To edit the properties of a fence:

1. Click on the fence to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.



- To change the type of fence, click on the appropriate graphic in the *Type* area. Choose from General, Privacy, Picket or Ranch. The General style just inserts a plain, flat surface.
- To change the height of the fence, edit the values in the **Fence Height** edit box.
- If you want the bottom of the fence to hug the terrain, check the **Hug Terrain?** check box, then select either **Raked** or **Stepped** from the *Slope Type* drop box.



- To change the dimensions or position of the fence posts, edit the parameters in the *Posts* area.
Secondary Post Position. Choosing *Centered* starts the spacing of intermediate posts from the middle of the fence to create a balanced look. Choose *From Start* starts the spacing of intermediate posts from the first main post.

Max. Post Spacing. The maximum allowable spacing between posts. If you stretch the fence, the spacing between posts increases. More posts are added to prevent the spacing from exceeding the maximum.

Post Width. The width (and depth) of fence posts.

Post Extension. The distance the fence posts extend past the top of the fence boards.

Post Rotation. Determines the rotation of the connecting post where two fence segments connect. Choosing *Half Way* rotates the connecting post half way between the angle. Choosing *None* leaves the connecting post aligned to the first fence.

- To change the dimensions of the top, middle or bottom rail, edit the parameters in the *Rails* area.

Rail Width. The width of the rail members.

Rail Depth. The thickness of the rail members.

Top Rail Height. The distance from the bottom of the fence to the top rail.

Middle Rail Height. The distance from the top rail to the middle rail.

Bottom Rail Height. The distance from the middle rail to the bottom rail.

- To change the dimensions of the boards in a privacy or picket fence, edit the parameters in the *Boards* area.

Board Style. Choose either *Squared* or *Pointed*. You would typically see pointed boards on a picket fence.

Board Width. The width of one fence board.

Board Depth. The thickness of one fence board.

Board Spacing. The distance from the center of one board to the center of the next board.


Board Offset. The offset of the bottom of the fence boards from the ground.

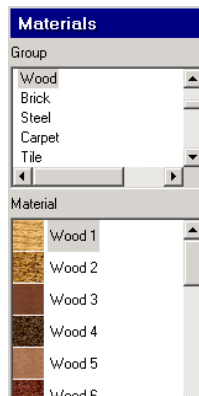
- When you're done editing properties, click **OK**.

Changing the Fencing Material

You can apply a different color or material to the boards, posts or rails of a fence. For example, you can select a different type of wood for a wood fence.

To apply different materials to a fence:

1. Display your model in 3D, and make sure the fence is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.
3. In the catalog panel, select the material you want to apply.
4. Click on the fence component you want to apply the material to. Materials are applied separately to the individual parts of the fence (fence boards, posts and rails). Clicking on one component will apply the material to all components of the same type. For example, clicking on one post will apply the material to all posts.
5. When you are finished applying materials, right-click and select **Finish**.



Inserting a Gate

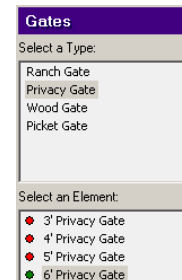
The catalog contains a variety of gate types, including wood, picket and ranch style gates. Gates just pop themselves right into fences. Naturally, if you are inserting a gate in a fence, you want to choose a gate size that corresponds to the fence size. For example, if your fence is a 6' wood privacy fence, you would likely choose the 6' wood privacy gate. Gates are shown slightly open so you can identify them easily in 2D and 3D views.

To insert a gate:

1. Select **Insert > Fences/Gates > Gates**, or click the Fences/Gates button on the Landscape toolbar and select **Gates**.



2. In the catalog, select the gate you want to insert.
3. Position the gate where you want it, then click to insert it. The gate will automatically pop itself into the fence when you position it in the fence.

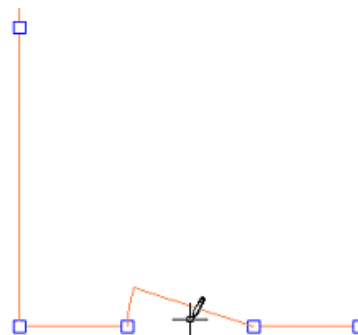


Deleting a Fence

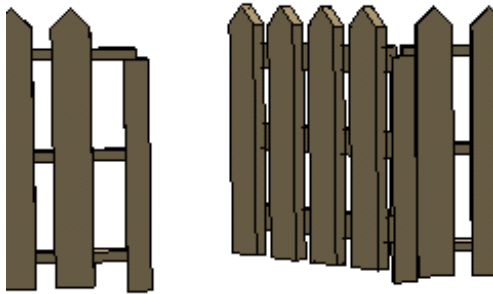
You can delete a fence in a couple of easy steps.

To delete a fence:

1. Select the fence. You can select multiple fence segments using Shift+click.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.




- Right-click and select **Finish**.



Moving a Gate

You can move a gate back and forth inside a fence by simply clicking and dragging it.

To move a gate:

- Click on the gate to select it.
- Hover your pointer over the center grab handle to display the Move cursor. 
- Click and drag to move the gate, then release your mouse button.

Flipping a Gate

You can use the Flip Opening tool to flip an entire gate around. If the gate originally opened out, it now opens in; if it was hinged on the left, it is now hinged on the right (and vice versa).

To flip a gate:

- Click the gate to select it.
- Right-click in the drawing area and select **Flip Opening**, or select **Edit > Modify Elements > Flip Opening**.

Flipping a Gate's Swing

Use the Flip Swing tool to flip only the swing of a gate. The gate will be hinged on the opposite side, but it will still open in the same direction, either in or out.

To flip a gate swing:

- Click the gate to select it.

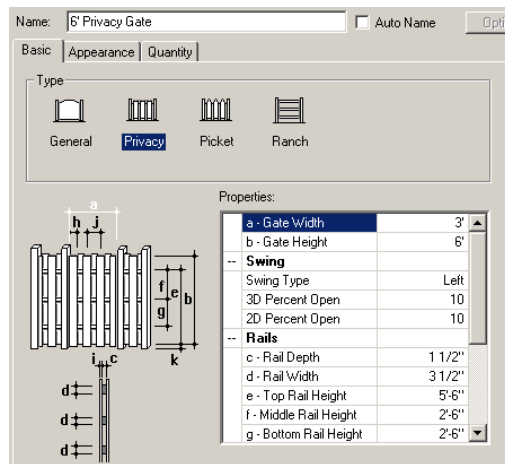
- Right-click in the drawing area and select **Flip Swing**, or select **Edit > Modify Elements > Flip Swing**.

Editing the Properties of a Gate

You can change the height and width of a gate as well as the dimensions of the rails and boards. You can also control how far the gate is open in 2D and 3D views.

To edit the properties of a gate:

- Click on the gate to select it.
- Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.



- To change the type of gate, click on the appropriate graphic in the **Type** area. Choose from General, Privacy, Picket or Ranch. The General style just inserts a plain, flat door.
- To change the overall size of the gate, edit the values in the **Gate Width** and **Gate Height** edit boxes.
- To change the swing type, select either Left or Right from the **Swing Type** drop box. This determines which side the gate is hinged on.
- If you want to change how far the gate is open in 3D views, edit the percentage in the **3D Percent Open** edit box. To change how far the gate is open in 2D views, change the percentage in the **2D Percent Open** edit box.

7. To change the dimensions of the top, middle or bottom rail, edit the parameters in the *Rails* area.

Rail Width. The width of the rail members.

Rail Depth. The thickness of the rail members.

Top Rail Height. The distance from the bottom of the gate to the top rail.

Middle Rail Height. The distance from the top rail to the middle rail.

Bottom Rail Height. The distance from the middle rail to the bottom rail.

8. To change the dimensions of the boards in a privacy or picket fence, edit the parameters in the *Boards* area.

Board Style. Choose either *Squared* or *Pointed*. You would typically see pointed boards on a picket fence.

Board Width. The width of one fence board.

Board Depth. The thickness of one fence board.

Board Spacing. The distance from the center of one board to the center of the next board.

Board Offset. The offset of the bottom of the gate boards from the ground.

9. When you're done editing properties, click **OK**.

Deleting a Gate

You can delete a gate in a couple of easy steps. When you delete a gate, the fence returns to its original state.

To delete a gate:

1. Select the gate.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 10

Decks & Patios

A great way to add more living space to your home without building an addition is to build a deck or patio. With outdoor living spaces becoming more and more desirable, *3D Home Architect® Landscape Design* gives you all the tools you need to create the exact look you want, quickly and easily.

You can create the precise size and shape of deck you want using the Deck tool. You can even add levels to your deck if you want for a truly customized look. Once you've got the main structure up, you can point and click to insert stairs of your choice.

Creating a patio involves clicking a few points to define the outline of the slab using the Pads tool.



Building a Deck with the Deck Tool

You can use the Deck tool to build a deck of virtually any shape and size. By default, decks include posts and railings. You can opt to include skirting if you want.

Once you've inserted a deck you can move, stretch, rotate, raise or lower it if needed, as well as edit its properties, which include settings for posts, railings and skirting.

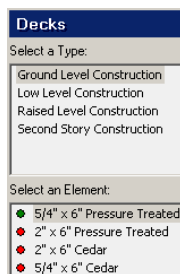
Decks are inserted at a height that is relative to the current building location. For information about building locations, see page 199.

To create a deck:

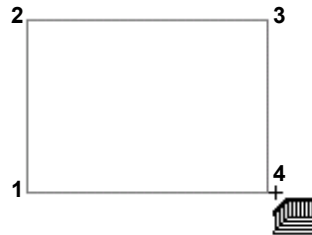
1. In the Building Locations drop box, select the location you want to associate the deck with. The height of a deck is determined by the **Height above current location** variable in the deck properties. You can edit this value after the deck has been inserted if necessary.
2. Select **Insert > Decks > Decks**, or click the Decks button on the Landscape toolbar and select **Decks**.



3. In the catalog, select the decking material you want to use.
4. Select a start point for the deck outline. Continue selecting points until the outline is defined. (You do not have to select the start point again because



the last point you pick is always closed back to the start point.)



5. Right-click and select **Finish**.

Moving a Deck

You can move a deck using the Move Whole Element tool.

To move a deck:

1. Click on one of the deck's edges to select the deck.
2. Right-click and select **Move Whole Element**, or select **Edit > Modify Elements > Move Whole Element**. Alternatively you can Shift+click to select the remaining edges.
3. Click and drag the deck to move it.
4. Release your mouse button.

Rotating a Deck

You can use the Rotate tool to rotate a deck about a selected point.

To rotate a deck:

1. Select the deck by clicking on one of its edges. A grab handle is displayed at each corner.
2. Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
3. Hover your pointer over the point you want to rotate around.
4. Click and drag to rotate the deck, then release your mouse button.

Note: When you rotate a deck, the direction of the deck boards does not change. You can change the decking direction if you want.

Changing the Direction of Deck Boards

You can use the Set Decking Direction tool to change the direction of your deck boards.


To change the direction of deck boards:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Set Decking Direction**, or select **Edit > Modify Elements > Set Decking Direction**.
3. Select two points to define a line that runs in the direction you want the deck boards to run. The deck boards update to match the direction of the line.

Stretching a Deck

You can stretch a deck in any direction by clicking and dragging one of its edges.

To stretch a deck:

1. Click on the deck edge you want to stretch.
2. Hover your pointer over the center blue grab handle to display the Move cursor. 
3. Click and drag to stretch the deck, then release your mouse button.

Reshaping a Deck

You can change the shape of a deck by stretching any of its corners.

To reshape a deck:

1. Click on the deck to select it. A grab handle is displayed at each corner.
2. Click and drag a corner grab handle to stretch the deck.
3. Release your mouse button.

Curving a Deck Edge

You can curve a deck edge using the Curve tool. Once the tool is active, you can click and drag the deck edge to curve it, or select a point to curve to.

To curve a deck edge by clicking and dragging:

1. Click on the deck edge you want to curve.
2. Right-click and select **Curve**, or select **Edit > Modify Elements > Curve**.
3. Click and drag the deck edge to the desired curve.
4. Release your mouse button.

To curve a deck edge to a selected point:

1. Click on the deck edge you want to curve.
2. Right-click and select **Curve**, or select **Edit > Modify Elements > Curve**.
3. Select the point you want to curve to. The deck edge automatically curves to the point.
4. Click to finish.

Changing the Height of a Deck

By default, decks are inserted at the floor level of the current building location.

To change the height of a deck:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Support property page, edit the value in the **Height above current location** edit box.
4. Click **OK**.

Editing Deck Post Properties

By default, the support system of a deck consists of 4"x4" wood posts spaced 8' apart. Posts are sunken 3'-6" into the ground for adequate support. You can edit the post type, post spacing and post depth. You can also disable posts altogether if you want.

To edit deck post properties:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Decks** dialog, select the Support tab.
4. If you want to remove posts from the deck, uncheck the **Include Posts** check box in the *Posts* area.
5. To select a different member to use for deck posts, click the **Select** button in the *Posts* area, then make your selection from the catalog.
6. To change the spacing between posts along beams, edit the value in the **Spacing along Beam** edit box.
7. To change the depth of the posts in the ground, edit the value in the **Depth below ground level** edit box. This effectively changes the overall height of the post, but does not affect the portion shown above ground.
8. Click **OK**.

Displaying Footings Under Deck Posts

Footings are not included in your deck by default, but you can display them instantly by editing deck properties. You can also choose the footing material you want to use.

To create footings under deck posts:

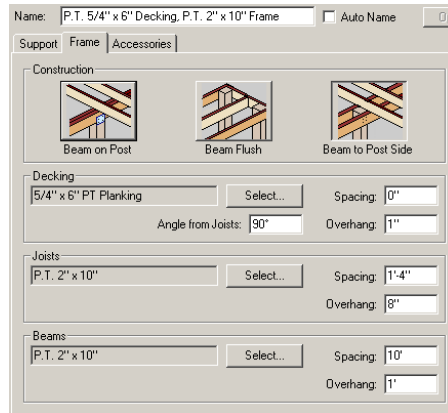
1. Select the deck by clicking on one of its edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Support property page, check the **Include Footings** check box in the *Footings* area.
4. Click the **Select** button in the *Footings* area, then select the desired footing type from the catalog.
5. Click **OK**.

Editing the Deck Frame

You have complete control over the way a deck is constructed. You can specify the way you want the beams constructed in relation to the posts. You can also select specific materials to use for deck boards, beams and joists, as well as edit the spacing and overhang of these members.

To edit the deck frame:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Decks** dialog, select the Frame tab.



4. To change the way the beams are constructed, click on the desired configuration in the *Construction* area. Beams are the vertical members that rest on or are attached to the posts, and that support the deck joists.
5. To select a different material for the deck boards, click the **Select** button in the *Decking* area, then make your selection from the catalog.
6. To edit the spacing between deck boards, edit the value in the **Spacing** edit box in the *Decking* area.
7. To change the amount the deck boards hang over the deck frame, edit the value in the **Overhang** edit box in the *Decking* area.

8. To adjust the angle of the deck boards in relation to the joists, edit the value in the **Angle from Joists** edit box.
9. To select a different material for the deck joists, click the **Select** button in the *Joists* area, then make your selection from the catalog.
10. To edit the spacing between joists, edit the value in the **Spacing** edit box in the *Joists* area.
11. To change the amount the joists hang over the beams, edit the value in the **Overhang** edit box in the *Joists* area. The general rule of thumb is to limit the extension to 1/3 of their length.
12. To select a different material for the deck beams, click the **Select** button in the *Beams* area, then make your selection from the catalog.
13. To change the amount the beams extend past each other, edit the value in the **Overhang** edit box in the *Beams* area.
14. Once you've specified the deck frame properties, click **OK**.

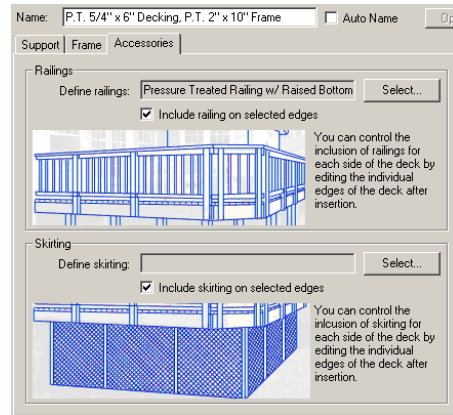
Changing the Railing Style

You can change a deck's railing type by making a selection on the Accessories property page.

To change a deck's railing style:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.

3. In the **Decks** dialog, select the Accessories tab.



4. In the *Railings* area, click the **Select** button.
5. Select the desired railing type from the catalog.
6. Click **OK**.

Controlling the Display of Deck Railings

You can delete railings from selected deck edges to provide access to the deck. If you want to remove all the railings on a deck, you need to select all of the deck's edges first.

To control the display of deck railings:

1. Click on the deck edge you want to remove a railing from, or add a railing to. A blue grab handle is displayed at the center of the selected deck edge. If you want to remove railings from other edges as well, use Shift+click to select the additional edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Decks** dialog, select the Accessories tab.
4. Disable the **Include railing on selected edges** check box.
5. Click **OK**.

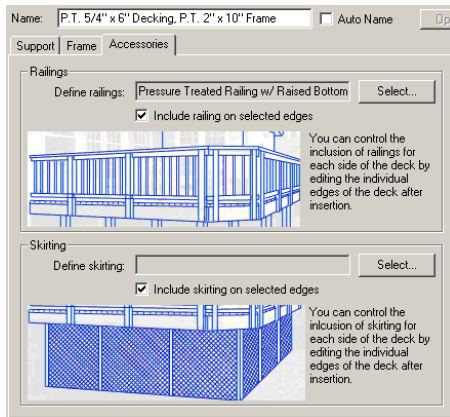
Note: If you add stairs to your deck, an opening will be automatically created in the railing.

Controlling the Display of Deck Skirting

Skirting is basically screening along the bottom of a deck that conceals the underside of the deck frame. It can also keep out animals and debris. Most decks display skirting. You can choose to turn skirting off if you want. If displaying skirting, you can select the skirting material you want to use, such as lattice.

To display skirting on your deck:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Decks** dialog, select the Accessories tab.



4. If you want to display skirting on your deck, check the **Include skirting on selected edges** check box.
5. Click the **Select** button in the *Skirting* area, then select the desired skirting material from the catalog.
6. Click **OK**.

Inserting Openings in a Deck

Once you have created a deck, you can insert a custom opening in it of virtually any shape and size using the Cut Opening tool.

You create the opening by picking points to define its outline.


To insert an opening in a deck:

1. Select the deck by clicking on one of its edges.
2. Right-click and select **Cut Opening**, or select **Edit > Modify Elements > Cut Opening**.
3. Select a start point for the opening.
4. Continue selecting points to define the opening. As you select points, the opening is created. The last point picked is always connected back to the start point to form a closed shape, so you don't have to pick the start point again.
5. When you have selected your final point, right-click and select **Finish**.

Resizing a Deck Opening

You can resize a deck opening by clicking and dragging one of its edges.

To stretch a deck opening:

1. Click on the opening edge you want to move. The entire opening is highlighted, and a blue grab handle appears at the center of the opening edge you selected.
2. Hover your pointer over the center grab handle to display the Move cursor. 
3. Click and drag in the direction you want to stretch.
4. When the opening is the correct size, release your mouse button.

Reshaping a Deck Opening

You can change the shape of a deck opening by stretching its corners. You can do this by clicking and dragging.

To reshape a deck opening by stretching:

1. Click on the opening to select it. A grab handle is displayed at each corner.
2. Click and drag a corner grab handle to stretch the opening.
3. Release your mouse button.

Curving a Deck Opening Edge

You can curve an opening edge using the Curve tool. Once the tool is active, you can click and drag the opening edge to curve it, or select a point to curve to.

To curve an opening edge by clicking and dragging:

1. Click on the opening edge you want to curve.
2. Right-click and select **Curve**, or select **Edit > Modify Elements > Curve**.
3. Click and drag the opening edge to the desired curve.
4. Release your mouse button.

To curve an opening edge to a selected point:

1. Click on the opening edge you want to curve.
2. Right-click and select **Curve**, or select **Edit > Modify Elements > Curve**.
3. Select the point you want to curve to. The opening edge automatically curves to the point.
4. Click to finish.


Removing Deck Openings

You can remove an opening from a deck by selecting all sides of the opening, then clicking and dragging it away from the deck.

Note: You cannot remove an opening using Delete.

To remove a deck opening:

1. Click on one of the opening's edges.
2. Shift+click to select the remaining sides.

3. Hover your pointer over one of the grab handles to display the Move cursor. 
4. Click and drag the opening off the deck until it disappears.

Deleting a Deck

You can remove a deck completely in a couple of easy steps.

To remove a deck:

1. Click on one of the deck's edges to select the deck.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Note: If you added stairs to your deck, you need to remove them separately.

Adding Stairs to a Deck

You can add a staircase to your deck with a single mouse click. Stairs automatically snap to your deck for easy insertion, and the railings on the deck are automatically removed to allow for the stair opening. By default, stairs extend from the deck platform to down to the terrain, so there's absolutely nothing you need to calculate. Also, deck stairs have a railing on both sides by default, but you can remove one or both of them if you want after the stairs have been inserted.

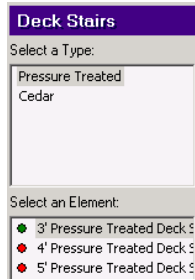
You can choose either pressure treated or cedar stairs, and edit the stair dimensions to get the exact result you want.

To add stairs to a deck:

1. Select **Insert > Decks > Deck Stairs**, or click the Decks button on the Landscape toolbar and select **Deck Stairs**.




2. In the catalog, select the type of stairs you would like to insert.
3. Move your pointer close to the deck edge. Position the stairs where you want them, then click to insert them.
4. Right-click and select **Finish**.



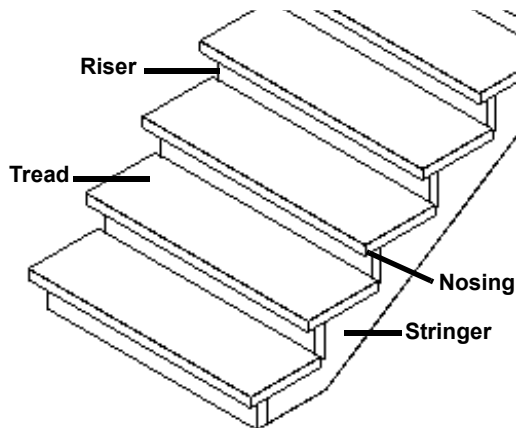
Moving Deck Stairs

You can move a deck staircase by clicking and dragging it along the deck edge. Note that you can't move deck stairs away from the deck, but you can move them to another deck edge. Also, the opening in the deck railing adjusts with the move of the deck stairs.

To move a staircase by clicking and dragging:

1. Click on the staircase to select it.
2. Hover your pointer over the center grab handle to display the Move cursor. 
3. Click and drag the staircase along the deck edge to move it.
4. Release your mouse button.

Parts of a Staircase

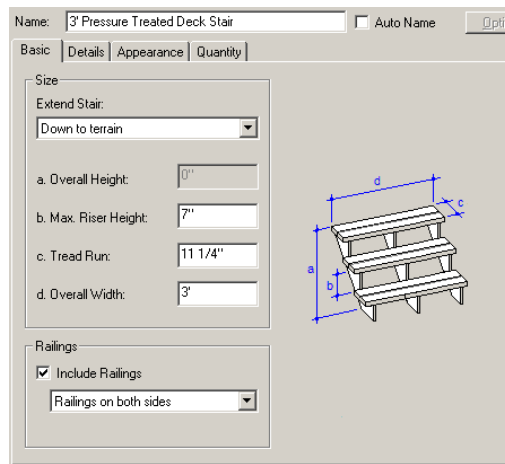


Editing the Size of Deck Stairs

You can edit the overall height and width of deck stairs, the width of the steps, and the riser height.

To edit the size of deck stairs:

1. Click on the staircase to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the properties on the Basic tab.



Extend Stair. The option selected determines where the base of the stairs sit. You can either change where they extend to, or specify an explicit height. By default, the deck stairs are inserted at deck level and run down to the terrain.

Down to terrain. Extends the stairs down to the ground.

Down to previous location. Extends the stairs to the floor level of the building location below the current one.

Down to deck location. Extends the stairs down to the floor level of the building location the deck is associated with. You might use this if you have raised your deck above the floor level of the current location and want to extend the stairs down.

Explicit Height. Extends the stairs down a specific distance that you define in the **Overall Height** edit box.

Overall Height. Available only if *Explicit Height* is selected in the **Extend Stair** drop box, this lets you define a fixed height for the stairs.

Max. Riser Height. The maximum distance allowed between individual steps. Note that if your riser height exceeds the width of the member you are using for your riser boards, two or more boards will be inserted for each riser.

Tread Run. The width of each step. The width of a step is measured from the nose of the step to the riser of the next step. Note that if your tread run exceeds the width of the member you are using for your treads, two or more boards will be inserted for each step.

Overall Width. The width of the stairs measured from one end of a step to the other end of the step.

Controlling the Display of Railings on Deck Stairs

By default, deck stairs have a railing on both sides. You can choose to have a railing on the left side only or right side only, or remove them altogether.

To remove railings from deck stairs:

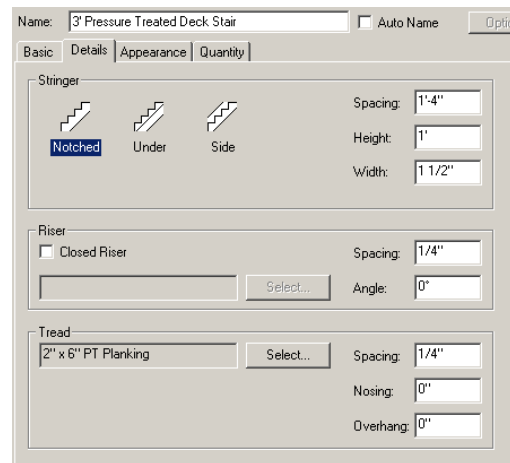
1. Click on the staircase to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the *Railings* area, uncheck the **Include Railings** check box if you don't want any railings on your deck stairs. If you want one or more railings on the stairs, leave this check box enabled.
4. If you want a railing on the left side of the stairs, select **Railing on left side** from the drop box. If you want a railing on the right side of the stairs, select **Railing on right side** from the drop box. If you want a railing on both sides of the stairs, select **Railing on both sides**.
5. Click **OK**.

Editing Stringers, Risers and Treads

You can specify detailed settings for the stringers, risers and treads on your deck stairs.

To edit stringer, riser or tread details:

1. Click on the staircase to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Deck Stairs** dialog, select the **Details** tab.



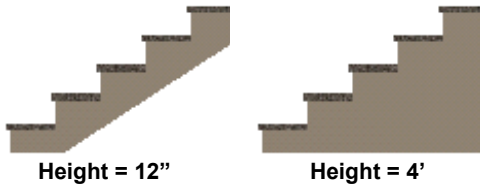
4. To change the stringer style, click the appropriate graphic in the *Stringer* area. Choose from **Notched**, **Stringer** and **Side**.
5. Edit the remaining properties as desired. They are described below.

Stringer

Spacing. The spacing between the outside stringers and intermediate stringers.

Height. The distance from the bottom of the stringer to the underside of the tread/riser intersection. Specifying a stringer height that is the same as the overall height of the staircase creates a staircase that is completely

closed on the sides. In other words, the stringers go right to the ground.



Width. The thickness of the stringer members.

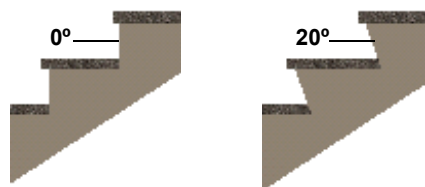
Riser

Closed Riser. Inserts riser boards under the steps. If you leave this disabled, the staircase will be open under the treads.

Select. Click this button to select a riser board to use.

Spacing. When the riser comprises two or more boards, this is the spacing between the boards.

Angle. The tilt of the riser boards. A value of 0 means the board is perpendicular to the step (straight up and down). A value above 0 tilts the riser down toward the back of the staircase. The maximum angle allowed is 20°.



Tread

Select. Click this button to select the type of wood to use for your steps.

Spacing. When each step comprises two or more boards, this is the spacing between those boards.

Nosing. The distance the step extends past the riser.

Overhang. The distance the ends of the steps extend past the outer stringers.

6. Click **OK**.

Deleting Deck Stairs

You can delete a set of stairs in a couple of easy steps.

To delete deck stairs:

1. Click on the stairs.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Creating a Patio

You can use the Pads tool to insert a concrete, brick or wood patio directly on your terrain. By drawing the outline of the patio, you control its precise size and shape.

By default, patio slabs hug the terrain they are inserted on. If the terrain is not flat where you are inserting the patio, you may want to turn off the slab's Hug Terrain option. This makes the slab flat and positions it at the Terrain Base Level specified in your Terrain Settings.

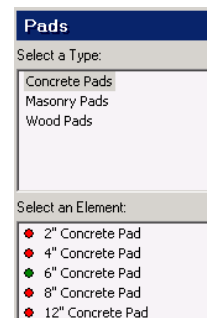
You can use the Materials Paintbrush to apply a different color or material to the patio after it has been inserted.

To create a patio:

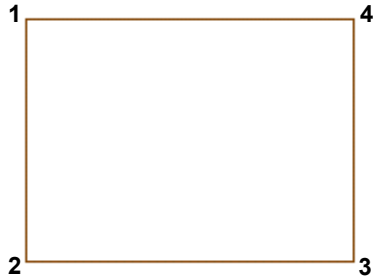
1. Select **Insert > Terrain > Pads**, or click the Pads button on the Terrain toolbar.



2. In the catalog, select the type of slab you want to insert.
3. Select a start point for the slab.
4. Continue selecting points to define the outline of the slab. Note that the last point picked always closes back to the start point,



so you don't have to pick the start point again.



5. Right-click and select **Finish** from the shortcut menu.

To disable the slab's Hug Terrain option:

1. Click on the slab to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Basic property page, uncheck the **Hug Terrain?** check box.
4. Click **OK**.

Moving a Patio Slab

You can move a patio slab by clicking and dragging it.

To move a patio slab:

1. Click on the slab to select it.
2. Right-click and select **Move Whole Element**, or select **Edit > Modify Elements > Move Whole Element**.
3. Click and drag the slab to move it, then release your mouse button.

Resizing a Patio Slab

You can resize a patio slab by stretching one of its edges.

To resize a patio slab by stretching it:

1. Click on the slab to select it.
2. Click on the edge you want to stretch.
3. Hover your pointer over the grab handle to display the Move cursor.



4. Click and drag to stretch the slab.
5. Release your mouse button.

Reshaping a Patio Slab

You can change the shape of a patio slab by stretching its corners. You can do this by clicking and dragging.

To reshape a patio slab:

1. Click on the slab to select it. A grab handle is displayed at each corner.
2. Click and drag a corner grab handle to stretch the slab.
3. Release your mouse button.

Rotating a Patio Slab

You can rotate a patio slab using the Rotate tool.

To rotate a patio slab:

1. Click on the slab to select it.
2. Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
3. Hover your pointer over the point you want to rotate around.
4. Click and drag to rotate the slab, then release your mouse button.

Editing the Thickness of a Patio Slab

You can edit the thickness of a patio slab on the slab's Basic property page.


To edit the thickness of a patio slab:

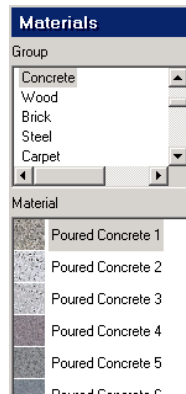
1. Click on the slab to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the Pads dialog, select the Basic tab.
4. Enter the desired thickness in the **Thickness** edit box.
5. Click **OK**.

Applying a Different Material to a Patio

You can use the Materials Paintbrush to quickly apply a different color or material to your patio. For example, you may want to change the patio to stone.

To apply a material to a patio:

1. Display your model in 3D view and make sure the patio is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.
3. In the catalog panel, select the material you want to apply.
4. Click on the patio surface. The material is immediately applied.
5. Right-click and select **Finish**.



Deleting a Patio Slab

You can delete a patio slab in a couple of easy steps.

To delete a patio slab:

1. Click on the slab to select it.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Retaining Walls

A well-built retaining wall system can preserve the natural shape of your land, reinforce hills and slopes, and protect your home from possible landslides or soil erosion. Retaining walls can also be an attractive addition to a garden or the overall landscaping around your home.

Drawing retaining walls is easy — just point and click. *3D Home Architect® Landscape Design* automatically displays dimensions as you draw, and connects corners for you.

Once inserted, any wall can be moved, rotated, lengthened, shortened, broken, curved or deleted. This lets you create the exact wall layout that you want.

The catalog contains wood, concrete and concrete block retaining walls in a variety of sizes. You can change the properties of walls, such as their thickness and appearance, as well as create custom walls.



Drawing Retaining Walls

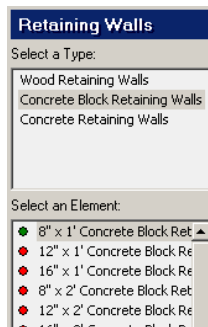
Retaining walls are a snap to draw — just point and click.

To draw a retaining wall:

1. Select **Insert > Terrain > Retaining Walls**, or click the Retaining Walls button on the Terrain toolbar.



2. In the catalog, select the wall type you want to insert.



3. Select a start point for the wall.

4. Move your cursor in the direction you want your wall to run. Its length is shown as you draw the wall.

Note: By default, drawing is constrained to 5° angles. To release this constraint, turn off your Angle Snap.

5. When the wall is the length you want, click to set its endpoint.
6. Continue selecting points to add on to the wall if you want.
7. When you are done, right-click and select **Finish**.

Editing a Retaining Wall's Height, Width or Elevation

You can edit the size properties of a wall by making changes on the wall's Basic property page.

To edit a retaining wall's size properties:

1. Select the wall whose properties you want to change. You can select multiple walls using Shift+click if you want.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Walls** dialog, select the Basic tab.
4. Edit the properties as desired:

Width. The thickness of the wall.

Wall Height. The physical height of the wall.


Extension Below Base. The height of the wall below the terrain.

5. Once the properties are set, click **OK**.

Lengthening and Shortening Retaining Walls

You can lengthen or shorten an individual wall by clicking and dragging one of the wall's ends.

To lengthen or shorten a retaining wall:

1. Select the wall. A grab handle is displayed at each wall end.
2. Hover your pointer over the wall end you want to stretch. The Stretch cursor  is displayed.
3. Click and drag the wall end until it has reached the desired length.
4. Release your mouse button.

Rotating a Retaining Wall

You can use the Rotate tool to rotate a wall about a selected point.

To rotate a retaining wall:

1. Select the wall. A grab handle is displayed at each wall end.
2. Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
3. Position your pointer over the grab handle you want to rotate the wall around.
4. Click and drag to rotate the wall, then release your mouse button.

Curving a Retaining Wall

You can curve a retaining wall using the Curve tool. Once the tool is active, you can click and drag the wall to curve it, or select a point to curve to.

To curve a retaining wall by clicking and dragging:

1. Click the wall to select it.

2. Right-click and select **Curve**, or select **Edit > Modify Elements > Curve**.
3. Click and drag the wall to the desired curve.
4. Release your mouse button.

To curve a retaining wall to a selected point:

1. Click the wall to select it.
2. Right-click in and select **Curve**, or select **Edit > Modify Elements > Curve**.
3. Select the point you want to curve to. The wall automatically curves to the point.
4. Click to finish.

Breaking a Retaining Wall

You can break a retaining wall into two or more segments using the Break tool. The segments can then be edited individually.


To break a retaining wall:

1. Click the wall to select it.
2. Right-click in the drawing area and click **Break**, or select **Edit > Modify Elements > Break**.
3. Double-click the point where you want to break the wall. This divides the wall into two segments that can be moved, stretched or manipulated individually.

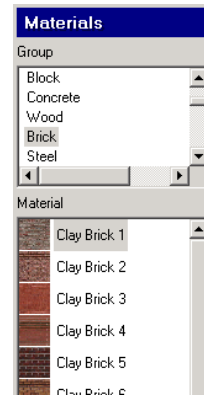
Applying Different Finishes to Retaining Walls

You can apply different finishes to your retaining walls using the handy Materials Paintbrush. The materials catalog contains an excellent selection of brick, concrete, wood and stone finishes.

To apply a material to a retaining wall:

1. Display your model in 3D, and make sure the wall face you want to apply the material to is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.

3. In the catalog panel, select the material you want to apply.
4. Click on the wall face that you want to apply the material to. The material is immediately applied.
5. Right-click and select **Finish**.



Deleting a Retaining Wall

You can delete a retaining wall in a couple of easy steps.

To delete a retaining wall:

1. Select the wall to remove. You can select multiple walls using Shift+click.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 12

Sidewalks, Pathways & Driveways

Sidewalks, pathways and driveways add to the overall aesthetics of your landscape and provide access to different areas of your property. Drawing them is easy — just select a start point, then point and click in the direction you want the pathway to run. Continue picking points to add segments if you want.

The *3D Home Architect® Landscape Design* catalog includes an excellent selection of pathway materials including wood, sand, gravel, concrete, brick and asphalt. You can even create a forest path! A number of different widths are available, but you can create a custom width if you want.



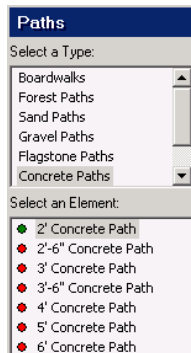
Drawing Sidewalks, Pathways and Driveways

The catalog contains a wide variety of path types, including boardwalks, sand paths, gravel paths, brick paths, and driveways. The width and thickness of a path is determined by the path's properties in the catalog. You control the length and direction of the path as you draw it. Dimensions are displayed as you draw each segment.

By default, all paths hug the terrain they are inserted on. If the terrain is not flat where you are inserting the path, you may want to turn off the path's Hug Terrain option. This makes the path flat and positions it at the Terrain Base Level specified in your Terrain Settings.

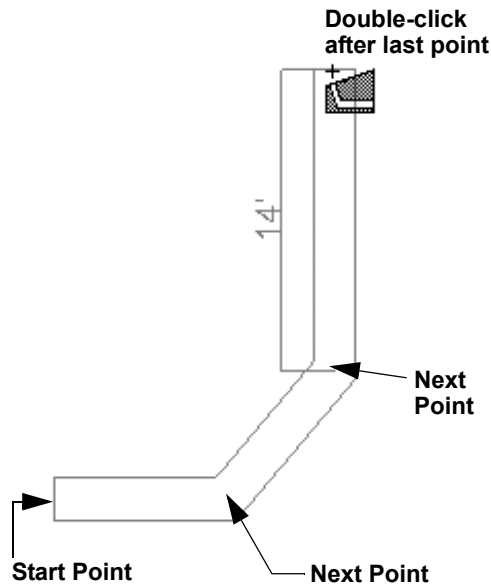
To create a path:

1. Select **Insert > Terrain > Paths**, or click the Paths button on the Terrain toolbar.
2. In the catalog, select the path type you want to insert.
3. Select a start point for your path. Note that your insertion point is on the center line of the path.
4. Move your cursor in the direction you want the path to run, then select an endpoint for the path. You can continue selecting points in any direction to add more sections to the path if you want.



Tip: To create a smooth curve in the path, click several points with a short distance between each point.

5. Double-click to finish, or right-click and select **Finish**.



To disable the path's Hug Terrain option:

1. Click on the path to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Basic property page, uncheck the **Hug Terrain?** check box.
4. Click **OK**.

Stretching a Path Element

You can lengthen, shorten or rotate a sidewalk, pathway or driveway by clicking and dragging its end or corner grab handles.

If the path has multiple segments, you can also stretch the path layout by moving one of its segments.

To stretch a path by clicking and dragging:

1. Select the path. If the path has multiple segments and you want to stretch the whole path layout by moving a segment, click on the segment you want to move.

2. Click and drag one of the path's end or corner grab handles to stretch or reshape the path, then release your mouse button. If you are moving a segment to stretch the entire layout, hover your pointer over the segment's center blue handle, then click and drag to stretch the path.

Moving a Path Element

You can move an entire path using the Move Whole Element tool.

To move a path:

1. Click on the path to select it.
2. Right-click and select **Move Whole Element**, or select **Edit > Modify Elements > Move Whole Element**.
3. Click and drag the path to where you want it, then release your mouse button.

Editing the Thickness or Width of a Path Element

You can edit the thickness of your path material or the path's overall width.


To edit the thickness or width of a path:

1. Select the path. If the path has multiple segments, you do not have to select them all. Property changes affect the whole path.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. To edit the thickness of the path, enter a value in the **Thickness** edit box.
4. To edit the width of the path, enter a value in the **Width** edit box.
5. Click **OK**.

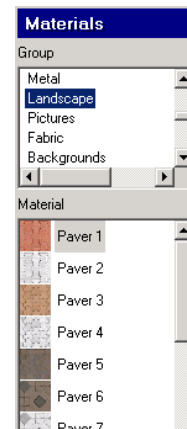
Applying Different Materials to Path Elements

You can apply a different material to any path, sidewalk or driveway using the quick and handy Materials Paintbrush.

To apply a material to a path element:

1. Display your model in 3D, and make sure the path is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.

3. In the catalog panel, select the material you want to apply. The Landscape category contains a good selection of pavers, flagstone, gravel and sand.



4. Click anywhere on the path surface.
5. Right-click and select **Finish**.

Deleting a Path Element

You can delete a sidewalk, pathway or driveway in a couple of easy steps.

To delete a path:

1. Click on the path to select it.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 13

Exterior Structures

3D Home Architect® Landscape Design offers an excellent selection of exterior structures to make your outdoor living space more functional. These include play gyms, swings, sandboxes, trampolines, tennis and volleyball courts, detached garages, sheds, gazebos, arbors, garden boxes, greenhouses, pools and hot tubs.

If you are creating a landscape plan and do not have a model in your project, you can insert a house template to create your landscape plan around.

All structures are inserted with a single mouse click and can be easily moved, rotated and edited.

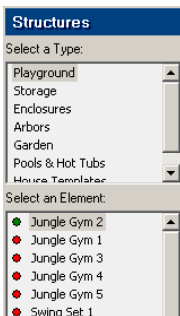


Inserting Exterior Structures

Inserting exterior structures is easy — just point and click.

To insert an exterior structure:

1. Select **Insert > Exterior Structures**, or click the Exterior Structures button on the Landscape toolbar.
2. In the catalog, select the structure you want to insert.
3. Position the structure where you want it, then click to insert it.
4. Right-click and select **Finish**.



Moving Exterior Structures

You can move exterior structures in plan view by simply clicking and dragging them.

To move an exterior structure:

1. Select the element you want to move.
2. Hover your pointer over the element's center grab handle to display the Move cursor.
3. Click and drag to move the element.
4. When the element is where you want it, release your mouse button.



Rotating Exterior Structures

You can rotate exterior structures by clicking and dragging them.

To rotate an exterior structure:

1. Select the element you want to rotate.
2. Hover your pointer over the triangular grab handle to display the Rotate cursor.
3. Click and drag to rotate the element.
4. When the element is at the desired rotation, release your mouse button.

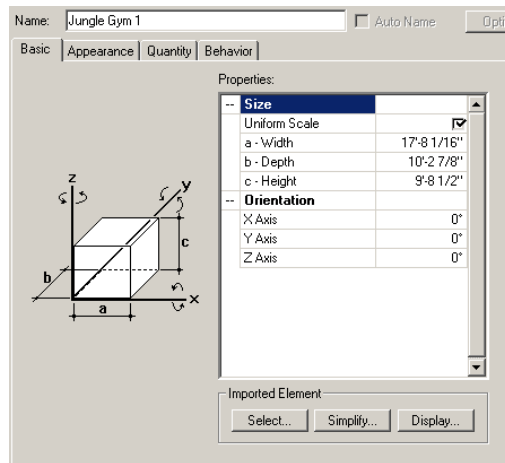


Editing the Size of an Exterior Structure

You can edit the height, width and depth of most exterior structures.

To edit the size of an exterior structure:

1. Select the structure.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the values on the Basic page. The **Uniform Scale** option ensures that the element scales uniformly when you change one of its dimensions.



4. Click **OK**.

Applying Different Colors or Materials to Exterior Structures

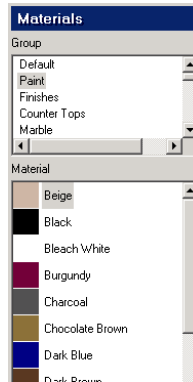
You can change the look of an exterior structure by applying different colors or materials to it.

To apply different colors or materials to an exterior structure:

1. Display your model in 3D, and make sure the structure is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button on any tabbed toolbar.



3. In the catalog panel, select the color or material you want to apply.
4. Click on the component you want to apply the material to. Some structures can have different materials applied to individual parts. For example, the roof of a shed can be different from the shed's walls.



5. When you are finished applying materials, right-click and select **Finish**.

Deleting an Exterior Structure

You can delete an exterior structure in a couple of easy steps.

To delete an exterior structure:

1. Select the structure.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 14

Exterior Furniture

The *3D Home Architect® Landscape Design* catalog includes a great selection of exterior furniture so you can relax, eat and entertain outdoors. Furniture types include patio tables, patio chairs, picnic tables, loungers and benches.

All it takes is one click to insert any piece of furniture.



Inserting Exterior Furniture

Inserting exterior furniture is easy — just point and click.

To insert exterior furniture:

1. Select **Insert > Exterior Furniture**, or click the Exterior Furniture button on the Landscape toolbar.
2. In the catalog, select the element you want to insert.
3. Position the element where you want it, then click to insert it.
4. Right-click and select **Finish**.



Moving Exterior Furniture

You can move exterior furniture in plan view by simply clicking and dragging it.

To move exterior furniture:

1. Select the element you want to move.
2. Hover your pointer over the element's center grab handle to display the Move cursor.
3. Click and drag to move the element.
4. When the element is where you want it, release your mouse button.



Rotating Exterior Furniture

You can rotate exterior furniture by clicking and dragging it.

To rotate exterior furniture:

1. Select the element you want to rotate.
2. Hover your pointer over the triangular grab handle to display the Rotate cursor.
3. Click and drag to rotate the element.
4. When the element is at the desired rotation, release your mouse button.

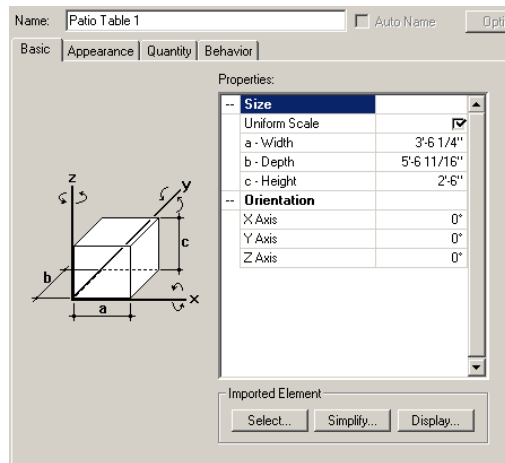


Editing the Size of Exterior Furniture

You can edit the height, width and depth of most exterior furniture.

To edit the size of exterior furniture:

1. Select the element.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the values on the Basic page. The **Uniform Scale** option ensures that the element scales uniformly when you change one of its dimensions.



4. Click **OK**.

Applying Different Colors or Finishes to Exterior Furniture

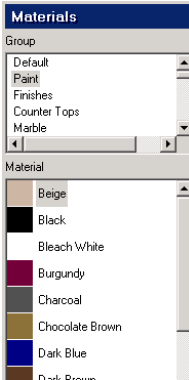
You can use the Materials Paintbrush to quickly apply a color, fabric or finish to any exterior furnishing element.

To apply materials to exterior furniture:

1. Display your model in 3D, and make sure the furnishing element is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button on any tabbed toolbar.



3. In the catalog panel, select the color or material you want to apply. You can find an assortment of colors in the Paint category.
4. Click on the component you want to apply the material to. Materials are applied separately to the individual parts of the element. For example, you can apply a specific color to a tabletop, and a different color to the legs of the table.
5. When you are finished applying materials, right-click and select **Finish**.



Deleting Exterior Furniture

You can delete any piece of exterior furniture in a couple of easy steps.

To delete exterior furniture:

1. Select the element.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 15

Exterior Accessories


It's always those small touches that really pull a design together. *3D Home Architect® Landscape Design* makes adding decorative accents and accessories a breeze - just point and click to insert a vast array of items, including fireplaces, fountains, wind chimes, decorative columns, corner accents, garden borders, weather vanes, door mats, patio umbrellas, trellises, bird baths, mailboxes, cars and planters.

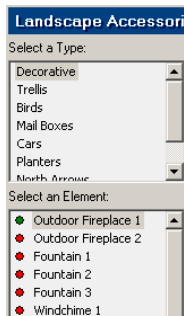


Inserting Exterior Accessories

Inserting exterior accessories is easy — just point and click. Accessories are inserted at a logical height, but you can edit their elevation after insertion if you want.

To insert an exterior accessory:


1. Select **Insert > Exterior Accessories**, or click the Exterior Accessories button  on the Landscape toolbar.
2. In the catalog, select the accessory you want to insert.
3. Position the element where you want it, then click to insert it.
4. Right-click and select **Finish**.



Moving Exterior Accessories

You can move exterior accessories in plan view by simply clicking and dragging them.


To move an exterior accessory:

1. Select the element you want to move.
2. Hover your pointer over the element's center grab handle to display the Move cursor. 
3. Click and drag to move the element.
4. When the element is where you want it, release your mouse button.

Rotating Exterior Accessories

You can rotate exterior accessories by clicking and dragging them.

To rotate an exterior accessory:

1. Select the element you want to rotate.
2. Hover your pointer over the triangular grab handle to display the Rotate cursor. 
3. Click and drag to rotate the element.

4. When the element is at the desired rotation, release your mouse button.

Raising or Lowering an Exterior Accessory

You can raise or lower an outdoor element using the Elevate tool.

To change the elevation of an exterior accessory:

1. Select the element.
2. Right-click and select **Elevate**, or select **Edit > Modify Elements > Elevate**. The value in the **Elevate** dialog is the current elevation of the element.
3. In the **Elevate** dialog, specify the desired elevation of the bottom of the element above the ground.
4. Click **OK**.

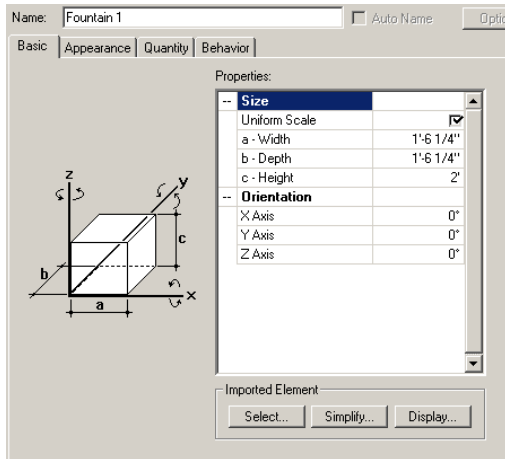
Editing the Size of an Exterior Accessory

You can edit the height, width and depth of most exterior accessories.

To edit the size of an exterior accessory:

1. Select the element.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the values on the Basic page. The **Uniform Scale** option ensures that the

element scales uniformly when you change one of its dimensions.




4. Click **OK**.

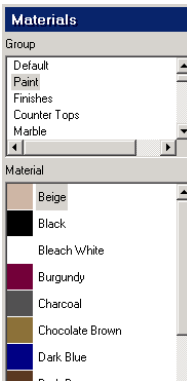
Changing the Look of an Exterior Accessory

You can change the look of an exterior accessory by applying different colors or materials to it.

To apply different colors or materials to an exterior accessory:

1. Display your model in 3D, and make sure the accessory is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.

3. In the catalog panel, select the color or material you want to apply.
4. Click on the component you want to apply the color or material to. Some accessories can have different materials applied to their individual parts.
5. When you are finished applying materials,



right-click and select **Finish**.

Deleting an Exterior Accessory

You can delete an exterior accessory in a couple of easy steps.

To delete an exterior accessory:

1. Select the element.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 16

Landscape Lighting

Outdoor lighting can beautify any landscape and offers security and visibility at night. Lighting can also play an important part when you create exterior 3DTrueView™ renderings. *3D Home Architect® Landscape Design* offers both light posts and path lights to enhance the exterior design of your home. You can even turn them on and off!

Outdoor lighting is inserted directly on the terrain. Just point and click!

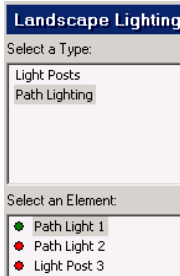


Inserting Landscape Lighting

Inserting outdoor light posts and path lights is easy — just point and click.

To insert a landscape light fixture:

1. Select **Insert > Landscape Lighting**, or click the Landscape Lighting button on the Landscape toolbar.
2. In the catalog, select the light you want to insert.
3. Position the light where you want it, then click to insert it.
4. Right-click and select **Finish**.



Moving a Landscape Light Fixture

You can move outdoor light fixtures in plan view by simply clicking and dragging them.

To move a landscape light fixture:

1. Select the element you want to move.
2. Hover your pointer over the element's center grab handle to display the Move cursor.
3. Click and drag to move the element.
4. When the element is where you want it, release your mouse button.



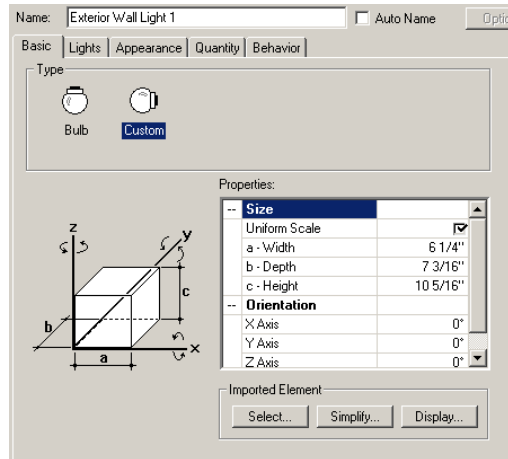
Editing the Size of a Landscape Light Fixture

You can edit the overall height, width and depth of light fixtures.

To edit the size of a landscape light fixture:

1. Select the light fixture.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the values on the Basic page. The **Uniform Scale** option ensures that the

element scales uniformly when you change one of its dimensions.



4. Click **OK**.

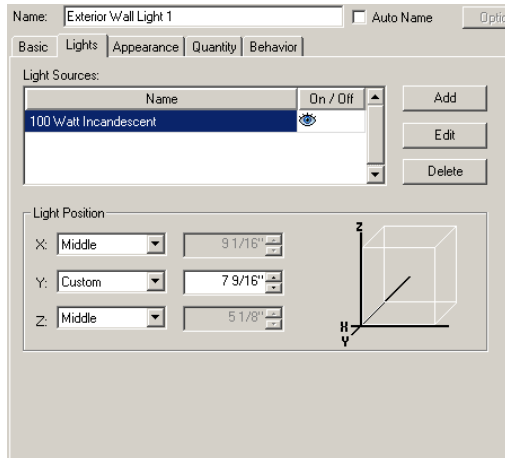
Editing a Light Fixture's Light Source

A light source is usually a type of light bulb. You can edit a light fixture's light source to achieve a different lighting effect.

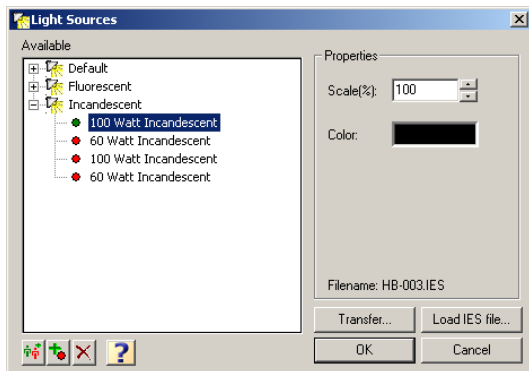
To edit a light fixture's light source:

1. Select the light fixture whose properties you want to edit.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.

3. Select the Lights tab.



4. To replace the currently selected light source with another type, click **Edit**, then select a light source from the **Light Sources** dialog. To add a light source to the fixture, click **Add**, then select a light source from the **Light Sources** dialog.



5. To delete a light source from the light fixture, click **Delete**.
6. To edit the position of the light source in relation to the light fixture, specify the X, Y and Z coordinates in the *Light Position* area. Coordinates are measured from the bottom center of the fixture. The small red box in the preview window indicates the current position of the light source. Changing the **X** value moves the light source left or right.

Selecting *Middle* positions the light in the center of the fixture, and selecting *Minimum* or *Maximum* positions it on the left or right side. If you select *Custom* you can enter a specific value in the adjacent edit box which is relative to the center position. For example, entering **-3** moves the light source 3" left from the center. Changing the **Y** value moves the light source forward or backward. Selecting *Minimum* brings the light source all the way forward, and selecting *Maximum* moves it to the back of the fixture. Changing the **Z** value moves the light source up or down. Selecting *Minimum* positions the light source at the bottom of the fixture, while selecting *Maximum* positions it at the top of the fixture.

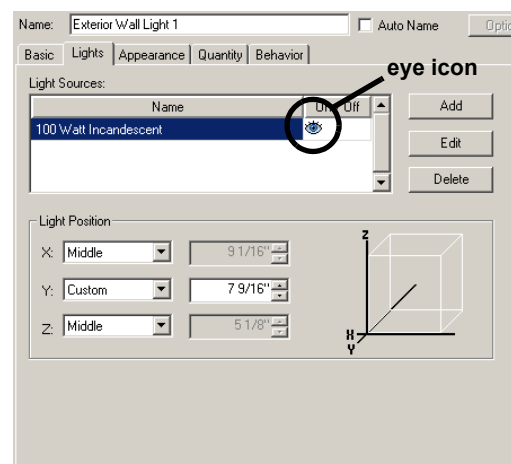
7. Once you've specified the properties, click **OK**.

Turning a Light On or Off

By default, lights are on when you insert them. You can virtually turn a light off by disabling its light source.

To turn a light on or off:

1. Select the light fixture you want to turn on or off.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Select the Lights tab.




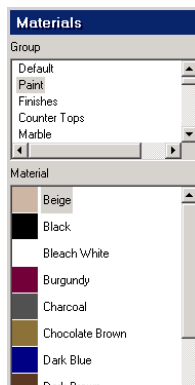
4. To turn the light on or off, click the eye icon next to the light source name.
5. Click **OK**.

Changing the Look of a Landscape Light Fixture

You can use the Materials Paintbrush to apply different colors or materials to different parts of a light fixture.

To change the look of a light fixture:

1. Display your model in 3D, and make sure the light fixture is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.
3. In the catalog panel, select the color or material you want to apply.
4. Click on the component you want to apply the material to. For some fixtures, materials are applied separately to the individual parts of the fixture.
5. When you are finished applying materials, right-click and select **Finish**.



Deleting a Landscape Light Fixture

You can delete an outdoor light fixture in a couple of easy steps.

To delete a light fixture:

1. Select the light fixture.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Chapter 17

Irrigation

You can insert pop-up sprinklers in your landscape plan with a single mouse click. When you insert a sprinkler, the coverage of the spray is outlined with a dashed line.

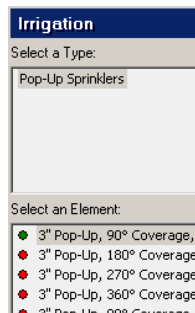


Inserting Irrigation

The catalog contains a wide selection of pop-up sprinklers with varying ranges of spray. You insert a sprinkler by simply pointing and clicking with your mouse. When you insert a sprinkler, the coverage of the spray is outlined with a dashed line.

To insert pop-up sprinklers:

1. Select **Insert > Irrigation**, or click the Irrigation button on the Landscape toolbar.
2. In the catalog, select the sprinkler you want to insert.
3. Position the sprinkler where you want it, then click to insert it. You can continue inserting more sprinklers if you want.
4. Right-click and select **Finish**.



Moving Sprinklers

You can move a sprinkler by simply clicking and dragging it.

To move a sprinkler:

1. Select the sprinkler.
2. Hover your pointer over the sprinkler's square grab handle to display the Move cursor.
3. Click and drag to move the element.
4. When the element is where you want it, release your mouse button.



Rotating Sprinklers

You can rotate a sprinkler (and its spray) by simply clicking and dragging its rotation handle.

To rotate a sprinkler:

1. Select the sprinkler.
2. Hover your pointer over the sprinkler's triangular grab handle.

3. Click and drag to rotate the sprinkler, then release your mouse button.

Editing the Height of a Sprinkler

All sprinklers in the catalog are 3" tall. You can edit the height of a sprinkler if you want.

To edit the height of a sprinkler:

1. Select the sprinkler.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Basic page, edit the value in the **Height** edit box.
4. Click **OK**.

Editing a Sprinkler's Spray Coverage

You can edit the distance covered by a sprinkler's spray.

To edit a sprinkler's spray properties:

1. Select the sprinkler.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the size values on the Basic property page. For most sprinklers you would edit the **Width** and **Depth** values. The Adjustable sprinkler in the catalog lets you specify a custom radius and included angle for the spray.
4. Click **OK**.

Deleting a Sprinkler

You can delete a sprinkler in a couple of easy steps.

To delete a sprinkler:

1. Select the sprinkler.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Part 5

Plants & Gardens

Garden Beds, Ponds & Other Filled Areas page 103

Edging page 107

Trees, Shrubs & Plants page 111

Chapter 18

Garden Beds, Ponds & Other Filled Areas

In the real world, one of the first things you need to do to create a garden is to dig out a bed for your plants. In *3D Home Architect® Landscape Design*, you can create a garden bed instantly by simply picking points to define the outline of the bed. The bed is then automatically filled with a material of your choice, such as soil or bark.

The versatile Fills tool is handy for more than just garden beds. Choose the Water fill to create a pond, or the Sand fill to create a horseshoe pit. The possibilities are endless.

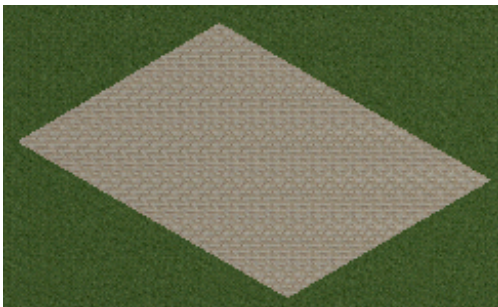
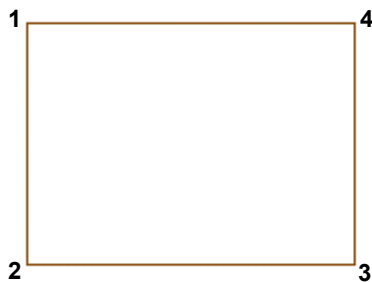
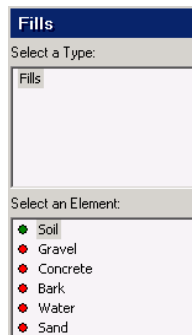


Creating Filled Areas

You can use the Fills tool to define an area filled with soil, sand, gravel, concrete, bark or water. You define the area by picking points to draw its outline. Filled areas automatically hug the terrain they are inserted on.

To create a filled area:

1. Select **Insert > Fills**, or click the Fills button on the Landscape toolbar.
2. In the catalog, select your fill material.
3. Select a start point for your filled area.
4. Continue selecting points to define the boundary of the filled area. Note that the last point picked always closes back to the start point, so you don't have to pick the start point again.
5. Right-click and select **Finish**.



Tip: If you want to create a raised garden you may want to insert a raised garden box from the catalog. See *Inserting Exterior Structures* on page 84.

Note: You cannot insert a fill on top of another fill.

Resizing a Filled Area

You can resize a filled area by stretching one of its edges.

To resize a filled area by stretching it:

1. Click on the filled area to select it.
2. Click on the edge you want to stretch.
3. Hover your pointer over the solid blue grab handle to display the Move cursor.
4. Click and drag to stretch the fill.
5. Release your mouse button.

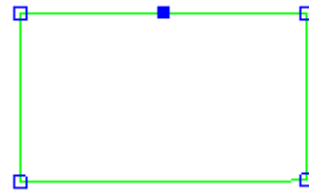


Reshaping a Filled Area

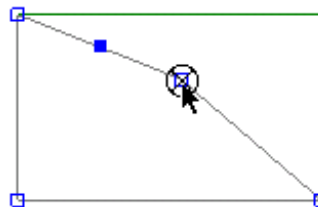
You can change the shape of a filled area by stretching its corners. You can do this by clicking and dragging its grab handles.

To reshape a filled area by stretching:

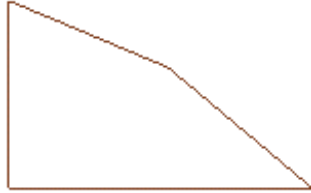
1. Click on the filled area to select it. A grab handle is displayed at each corner.



2. Click and drag a corner grab handle to stretch the filled area.



3. Release your mouse button.



Rotating a Filled Area

You can rotate a filled area using the Rotate tool.

To rotate a filled area:

1. Click on the filled area to select it.
2. Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
3. Hover your pointer over the corner you want to rotate around.
4. Click and drag to rotate the fill, then release your mouse button.

Moving a Filled Area

You can move a filled area using the Move Whole Element tool.


To move a filled area:

1. Click on the filled area to select it.
2. Right-click and select **Move Whole Element**, or select **Edit > Modify Elements > Move Whole Element**.
3. Click and drag the filled area to move it, then release your mouse button.

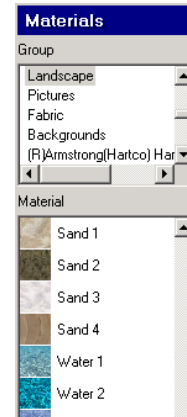
Changing the Fill Material

You can use the Materials Paintbrush to quickly change the look of a fill.

To change the fill material:

1. Display your model in 3D, and make sure the path is visible in the view.
2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.

3. In the catalog panel, select the material you want to apply. The Landscape category contains fill materials like water, sand and gravel.
4. Click anywhere on the surface of the fill. The material is applied immediately.
5. Right-click and select **Finish**.



Deleting a Filled Area

You can delete a filled area in a couple of easy steps.

To delete a filled area:

1. Click on the filled area to select it.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Note: Deleting a fill returns the terrain to its original state where the fill was located.

Chapter 19

Edging

Edging can be an attractive accent around gardens, ponds, sidewalks, driveways, and other areas. It can also help retain fill materials and keep weeds out of your garden. You can choose from PVC lawn edging, wood posts, or rails.

Drawing edging is easy — just point and click to define the start and end point of the edging, then keep clicking to add more segments.

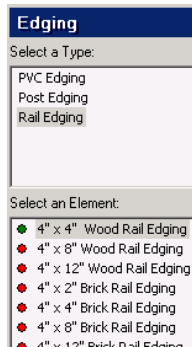


Inserting Edging

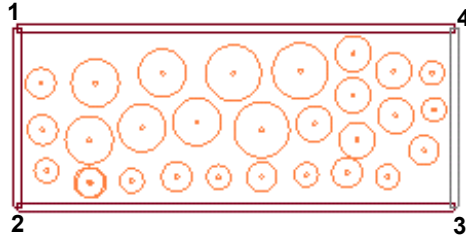
Use the Edging tool to add PVC lawn edging, wood posts, or wood, brick or concrete rails to your landscape design. The width and height of the edging is determined in the material's properties. You insert edging by simply picking points to define the end points and direction of the edging.

To insert edging:

1. Select **Insert > Edging**, or click the Edging button on the Landscape toolbar.
2. In the catalog, select your edging material.
3. Select a start point for the edging.
4. Move your cursor in the direction you want the edging to run, then select an endpoint for the edging. You can continue selecting points in any direction to add more sections to the edging if you want.



5. Right-click and select **Finish**.



Tip: You can also insert decorative borders around a garden. See *Inserting Exterior Accessories* on page 92.

Cleaning Up Corners

If you edged around an area with posts or rails, you'll notice that the edging members connect on center at the corners. You may want to stretch the corners to form completely flush intersections.

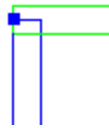


To clean up the corners of edging:

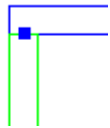
1. Click on one of the edging members. Blue grab handles are displayed at the ends of the member.
2. Hover your pointer over the end grab handle to display the Move cursor.



- Click and drag the edging so that it meets up with the outside of the member it is connected to, then release your mouse button.



- Select the other member.
- Click and drag the end so that it meets up with the inside edge of the connecting member, then release your mouse button.

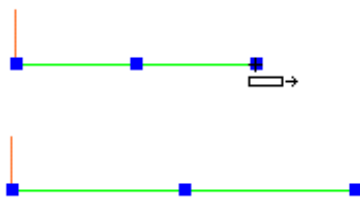


Changing the Length of Edging

You can lengthen or shorten edging by clicking and dragging its end points.

To change the length of edging:

- Select the edging you want to lengthen or shorten. Grab handles are displayed at the center and ends of the edging.
- Click and drag one of the end grab handles to stretch the edging, then release your mouse button.



Breaking Edging

When you create a break in edging, you can select and edit the portions on either side of the break independently.


To create a break in edging:

- Select the edging you want to break.
- Right-click and select **Break**, or select **Edit > Modify Elements > Break**.
- Double-click where you want to break the edging.

Moving Edging

You can move a piece of edging by clicking and dragging it. If the member is attached to any other edging members, the other members move along with it.

To move edging:

- Select the edging you want to move. If you want to move multiple members, use Shift+click to select the other members.
- Hover your pointer over the center blue grab handle to display the Move cursor. 
- Click and drag to move the edging, then release your mouse button.

Rotating Edging

You can use the Rotate tool to rotate a wall about a selected point.

To rotate edging:

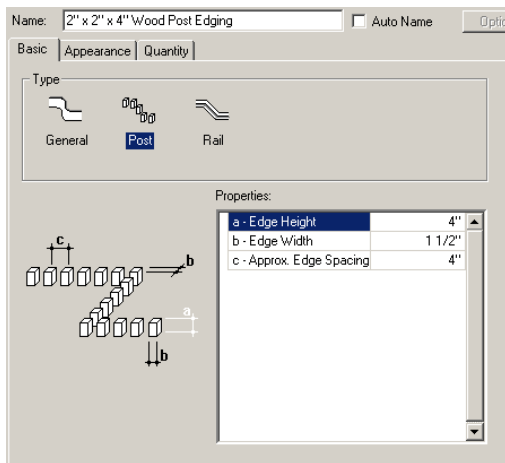
- Select the edging. A grab handle is displayed at the center and ends of the edging.
- Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
- Hover your pointer over the point you want to rotate around.
- Click and drag to rotate the edging, then release your mouse button.

Editing the Height or Width of Edging

You can edit the height or width (thickness) of edging on the edging's Basic property page.

To edit the height or width of edging:

1. Click on the edging to select it. Use Shift+click to select multiple segments if necessary.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.




3. To edit the height of the edging, change the value in the **Edge Height** edit box.
4. To edit the width (thickness) of the edging, change the value in the **Edge Width** edit box. Note that this variable is not available for PVC edging.
5. If the edging is post edging, you can control the spacing between posts by editing the value in the **Approx. Edge Spacing** edit box.
6. Click **OK**.

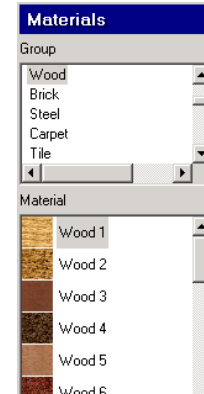
Changing the Edging Material

You can apply a different color or material to edging using the Materials Paintbrush.

To apply different materials to edging:

1. Display your model in 3D, and make sure the edging is visible in the view.

2. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.
3. In the catalog panel, select the material you want to apply.
4. Click on the edging.
5. Right-click and select **Finish**.



Deleting Edging

You can delete edging in a couple of easy steps.

To delete edging:

1. Select the edging to remove. You can select multiple edging segments using Shift+click.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

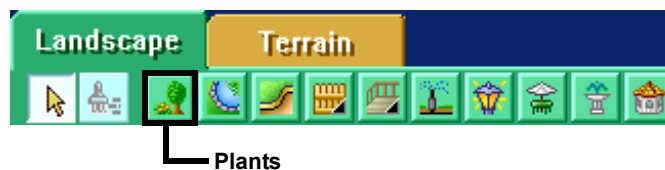
Chapter 20

Trees, Shrubs & Plants

Nothing brings your landscape to life like trees, shrubs, plants and flowers. With over 7500 plants to choose from, *3D Home Architect® Landscape Design* lets you create the landscape of your dreams.

Inserting plants involves nothing more than a single mouse click, and once inserted, they can be dragged and dropped anywhere you like. You can even make them grow!

If you need to learn more about a particular species of plant, you can view the plant's light, water, temperature and soil requirements in its properties. For even more detailed information you can browse through *3D Home Architect® Landscape Design's* comprehensive Plant Encyclopedia.

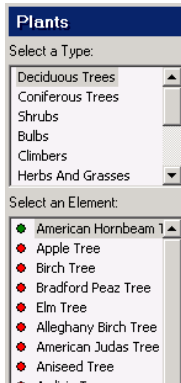


Inserting Plants

Plants are inserted with a simple mouse click. Once inserted, they can be dragged and dropped anywhere in the drawing.

To insert a plant:

1. Select **Insert > Plants**, or click the Plants button on the Landscape toolbar.
2. In the catalog, select the plant you want to insert. If you want to view the plant's size or requirements before inserting it, right-click in the catalog and select **Properties**.
3. Position the plant where you want it, then click to insert it.
4. Right-click and select **Finish**.



Note: Although the catalog contains a wide variety of plants for you to insert, it does not contain all the plants listed in the Plant Encyclopedia. You can, however, add plants from the Encyclopedia to the current catalog. For more information, see *Adding a Plant from the Encyclopedia to the Catalog* on page 125.

Moving a Plant

You can move a plant easily by just clicking and dragging it.

To move a plant:

1. Select the plant you want to move.
2. Hover your pointer over the plant's center grab handle to display the Move cursor.
3. Click and drag to move the plant.
4. When the plant is where you want it, release your mouse button.



Changing the Elevation of a Plant

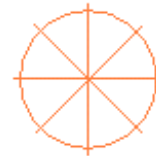
You can raise or lower a plant using the Elevate tool. You may want to do this for hanging plants, or plants in raised garden boxes.

To change the elevation of a plant:

1. Select the plant.
2. Right-click and select **Elevate**, or select **Edit > Modify Elements > Elevate**.
3. In the **Elevate** dialog, specify the desired elevation of the plant above the ground.
4. Click **OK**.

Editing the 2D Appearance of a Plant

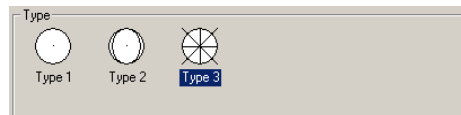
By default, plants are represented by a circle in 2D plan view. At the center of the circle is a smaller circle that represents the trunk.



You can choose from three 2D plant styles. You can also change the diameter of the trunk in 2D, or hide the trunk altogether.

To edit the style of a plant in 2D:

1. Select the plant whose properties you want to edit.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Plants** dialog, select the Basic tab.
4. To change the style of the circle shown in 2D plan view, click the style you want in the *Type* area.



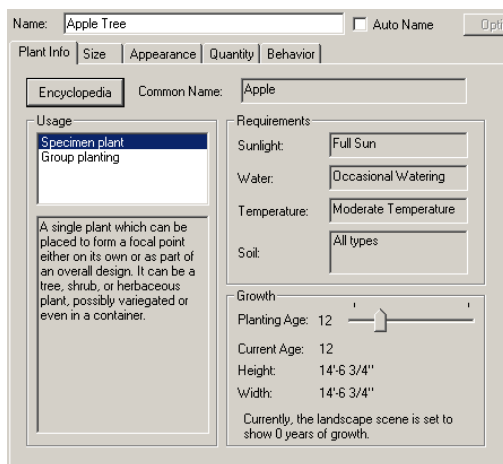
- To change the size of the trunk in 2D plan view, edit the value in the **Trunk Diameter** edit box. To hide the trunk from 2D view, select **No** from the **Show trunk in plan?** drop box.
- Click **OK**.

Changing the Age of a Plant

The age of a plant determines its size at planting time. You can increase or decrease the age of a plant by making a change on the plant's Plant Info property page.

To change the age of a plant:

- Click on the plant whose planting age you want to change.
- Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
- In the **Plants** dialog, select the Plant Info tab.



- Move the **Planting Age** slider left or right until the desired planting age is displayed. Planting age is measured in years.
- Click **OK**.

Forcing a Custom Plant Size

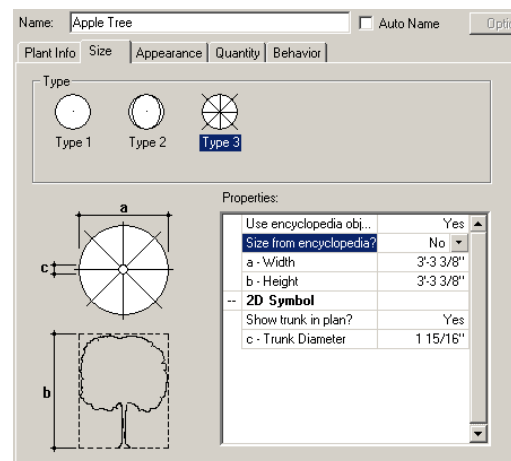
The size of a plant is determined by properties in the Plant Encyclopedia. You can specify a custom height and width for a plant on the plant's Size property page. Note that if you do this, however,

the plant's size changes in both 2D and 3D regardless of the Planting Age setting on the Plant Info page.

Note: If you just want to see plants at a different maturity level (i.e. change their age), you should change their planting age instead. See *Changing the Age of a Plant* on page 113. You can also apply an overall age change to your landscape. See *Seeing Plant Growth Over Time* on page 114.

To change the size of a plant:

- Select the plant whose properties you want to edit.
- Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
- In the **Plants** dialog, select the Size tab.
- Set the **Size from encyclopedia** option to **No**.



- To change the width of the plant, enter a value in the **Width** edit box.
- To change the height of the plant in 3D view, edit the value in the **Height** edit box.
- Click **OK**.

Deleting a Plant

You can delete a plant in a couple of easy steps.

To delete a plant:

1. Select the plant.
2. Press the **Delete** key on your keyboard, right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Seeing Plant Growth Over Time

Once you have inserted plants in your landscape plan, you can see how they will look any specified number of years down the road using the **Plant Growth Over Time** feature.

To see plant growth over time:

1. Select **Tools > Gardening > Plant Growth Over Time**.



2. Enter the number of years to add to your landscape.
3. Click **OK**.

Applying Seasonal Changes to Plants

The **Plant Seasonal Change** feature updates the appearance of the plants in your drawing to reflect a particular season. Generally the change applies to flowering plants and trees that have a certain bloom time.

You specify the season by adjusting the time of year on the Global Settings page of the **Program Settings** dialog.

To apply seasonal changes to your plants:

1. Select **Tools > Gardening > Plant Seasonal Change**.

2. In the **Program Settings** dialog, change the date. Select a month by clicking the arrows on the month bar at the top of the calendar. Select a day by clicking a number on the calendar.
3. Click **OK**. The plants in your drawing are updated according to the time of year you specified.

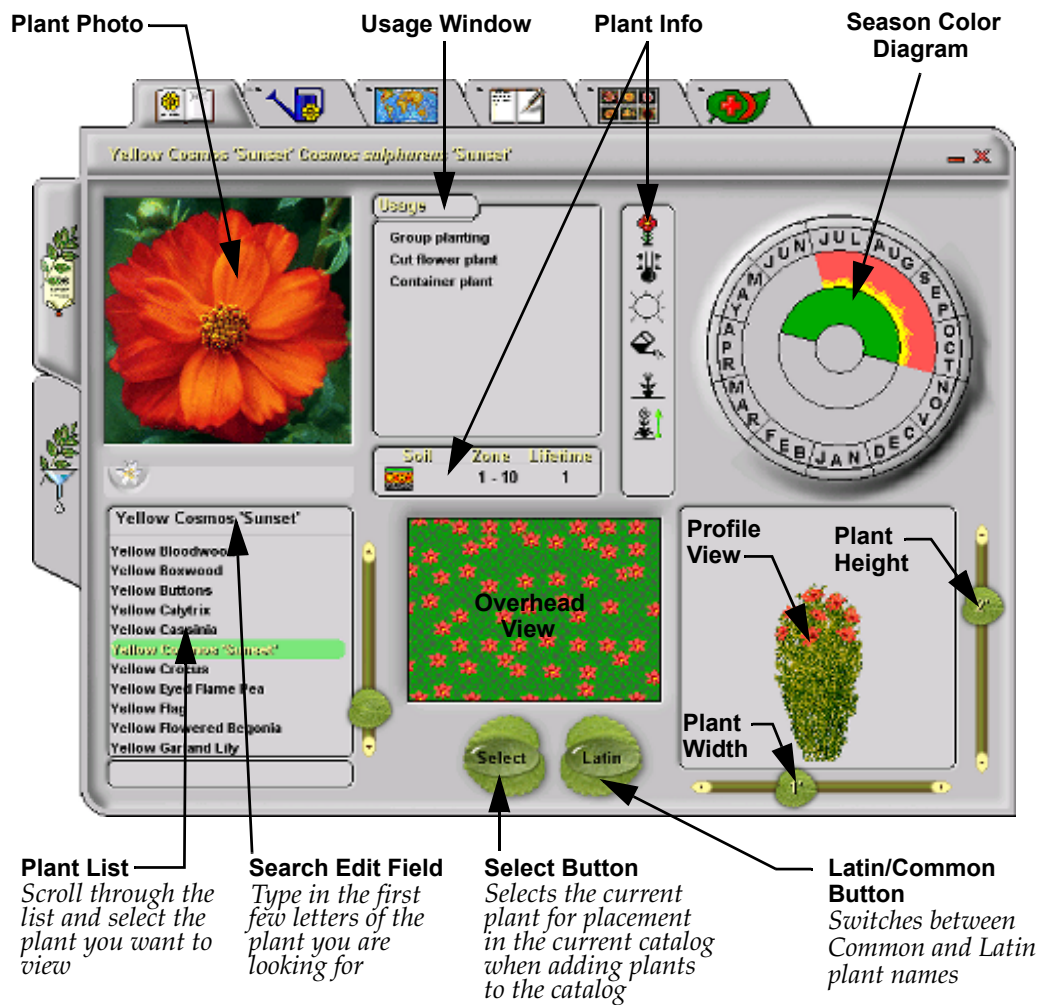
Note: Keep in mind that seasonal changes may have different results depending on the plant's properties in the Encyclopedia. Things to consider are the climate of the region the plant is in, and the plant's world origin.

Using the Plant Encyclopedia

The **Plant Encyclopedia** contains comprehensive information on over 7500 different varieties of plants. The Encyclopedia has many uses related to the selection and care of plants. You can view information about any plant, select plants based on certain criteria, research potential diseases, and learn how to care for your plants.

To access the Plant Encyclopedia, select **Tools > Gardening > Plant Encyclopedia**.

You can also access the Plant Encyclopedia by clicking the **Encyclopedia** button on a plant's Encyclopedia property page.



The Encyclopedia Main Page

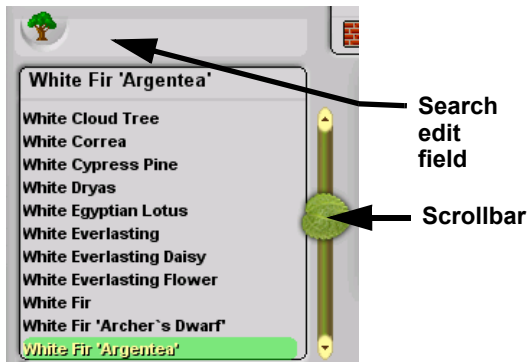
The Encyclopedia's main page contains a comprehensive plant list that you can scroll through and select plants from. The page also displays a photo and two previews of a selected plant, as well as basic information about the plant and its appropriate growing environment.

Selecting a Plant to View

By default, the plant list contains all 7500 plant species. If you have used the **Plant Filter** to filter out certain plant types, the list is smaller. (For more information about the Plant Filter, see *Filtering the Plant List* on page 124).

To select a plant in the plant list, use the scrollbar beside the plant list to scroll through the list of plants, then click on the plant you want to view. By default, common plant names are listed in the plant list. You can switch to Latin names by clicking the **Latin** button.

If you know the name of the plant you are looking for, you can locate it more quickly by typing the first few letters of the plant's name in the Search Edit field above the plant list. The list of plants will move to the closest match as you type.

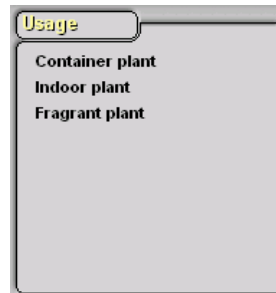


Viewing Plant Information

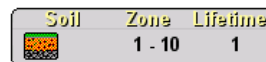
The Encyclopedia's main page displays images and basic information about the currently selected plant.

Usage. This window lists all the possible ways you can use the plant. Click one of the usage

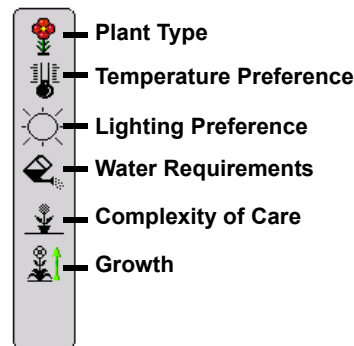
options to view a brief description of the usage in the **Plant Usage** catalog.



Soil/Zone/Lifetime. The window below the Usage window indicates **Soil Preference** (alkaline, acidic, heavy, etc.), **Zone** (ranging from 1 for Sub-Arctic to 10 for Sub-Tropical), and **Lifetime** (the life span of the plant in years). Each of the icons/items in this window has a tool tip. If you hover your cursor over the icon/item, a small pop-up window appears displaying a brief description of the item. For example, if you hover your cursor over the soil preference icon, the window will display the preferred soil type that the icon indicates.



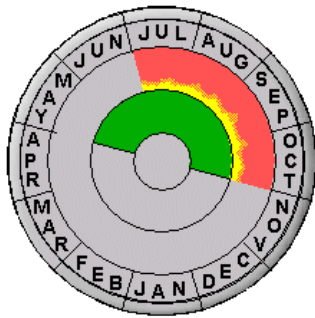
Plant Type and Needs. The window to the right of the Usage window indicates the following:



Each of the icons in this window has a tool tip. If you hover your cursor over the icon, a small pop-

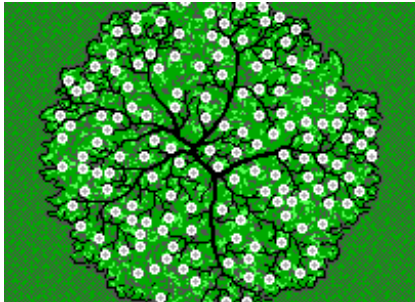
up window appears displaying a brief description of the icon.

Season Color Diagram. This circle gives you an idea of what you can expect from the chosen plant throughout the year. The outer circle shows the months in which the plant blooms, and the color of its flowers. Fruits are also indicated in this circle, showing the period when they ripen, and the color of their fruit. The inner circle indicates when the plant has foliage (including autumn leaves), and the color of its leaves.



Plant Views

The main page has two views: overhead and profile. The overhead view shows you a textured view of the plant from above.



The profile view gives you an idea of the plant's height and spread, and shows you what your

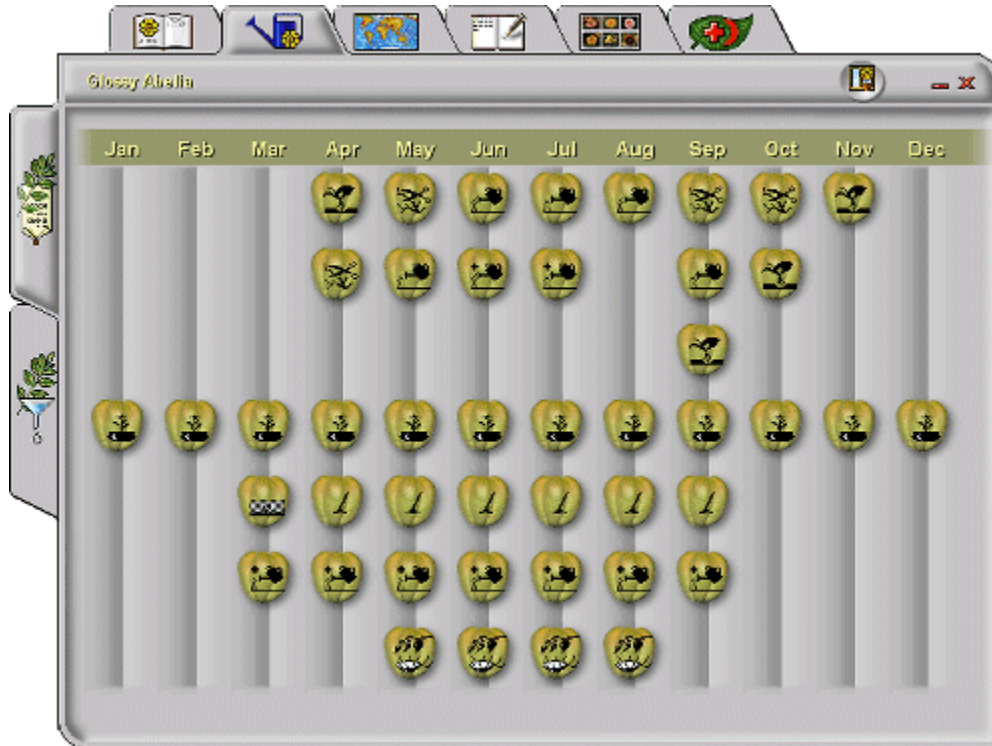
plant will look like in 3D. The profile view is shown in the lower right corner of the main page.



Note: The profile view shows the plant's total height. If the plant is a vegetable, this includes the underground part. If the plant is a water plant, the underwater part is included. The width of bushes and flowers can be affected by how they are pruned. The plant will reach optimum size at maturity and under favorable conditions.

Plant Care Calendar

The **Plant Care Calendar** page shows the required monthly care (planting, watering, fertilizing, etc.) for the currently selected plant.

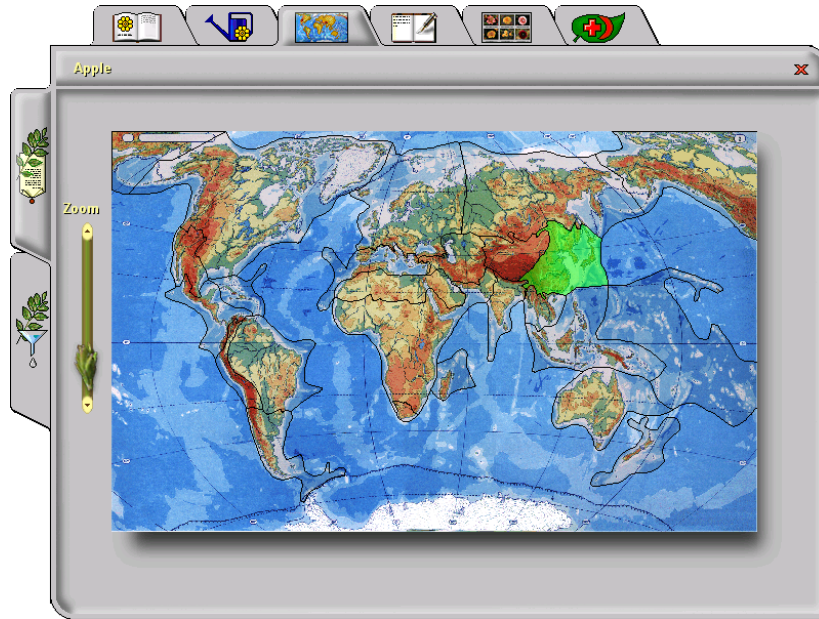


To see detailed information about each plant care task, click on the icon. A **Care** dialog appears displaying helpful animations and tips on how to complete a given task. Click **Animate** to play the animation, and **Stop** to stop it. Clicking the tools icon in the top right corner of the dialog opens a dialog showing the tools you will need to complete the task.



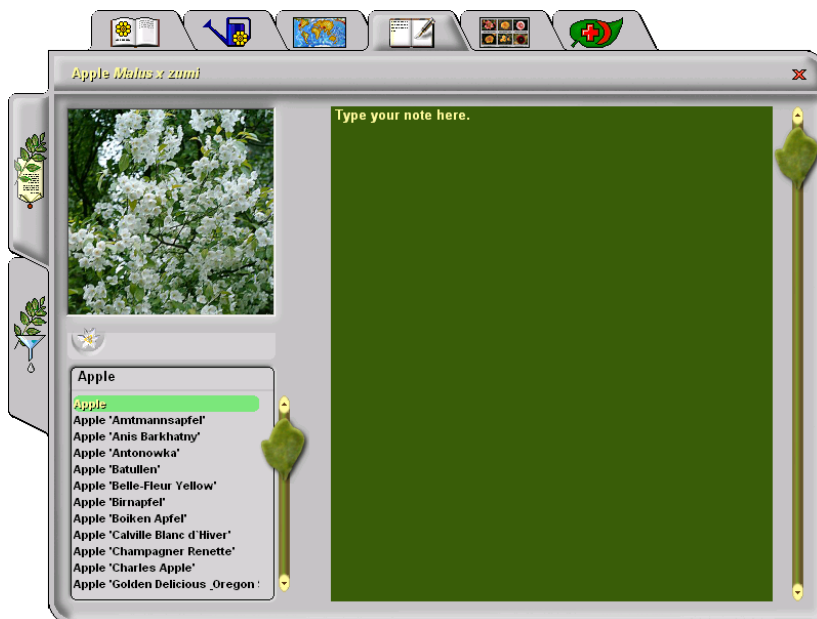
World Map Page

The **World Map** page displays a world map that indicates the region of the world where the currently selected plant originates. Right-click on a highlighted region to see details about the climate and growing conditions most favorable for plants indigenous to the region.



Notebook Page

You can use the **Notebook** page to enter and view notes about the currently selected plant. To select a plant, scroll through the list and click on it, or use the Search Edit field above the plant list to enter the first few letters of the plant name and find a quick match. Click in the box on the right side of the page and type your note. When you move to another page in the Encyclopedia, your text is saved automatically.



Picture Page

The **Picture** page contains a collage of thumbnail images of all the available plants in the plant list. You can browse through the images manually or by using the arrows at the top of the page.

To view a large picture of a selected plant, click the Full Size button at the top of the page.

Click the Thumbnails button to return to the thumbnails.



Diseases Page

The **Diseases** page lists the possible diseases that may affect a plant. By default, the disease list contains the diseases that can affect the currently selected plant. If you want to view a comprehensive list of diseases for all plants, click **All** in the bottom right corner of the page.

When you select a disease in the disease list, you will see a picture of the disease, details of its symptoms in the **Symptoms** windows, and care information in the **Control** window.



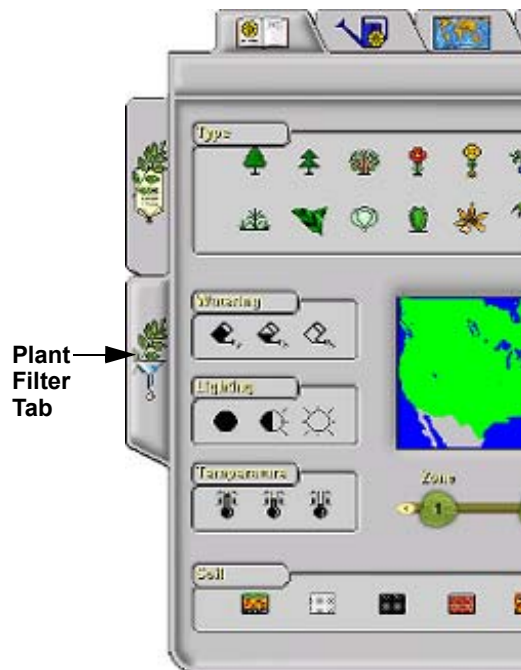
If you want to search in reverse to find all plants affected by a specific disease, click the **Filter** button at the bottom of the page. This opens the main Encyclopedia page. To restore your plant list, return to the **Diseases** page and click the **All** button.

Filtering the Plant List

The Encyclopedia's Plant Filter lets you filter out unwanted plants from your plant list by specifying various criteria.

To use the Plant Filter:

1. Select the Plant Filter tab on the left side of the Encyclopedia window.



2. Each Encyclopedia page has different filtering options. Click on the tabs along the top of the Encyclopedia window to select the page you want.

The main Encyclopedia page lets you select the **Plant Type**, **Watering Needs**, **Lighting Preference**, **Soil Preference**, **Zone**, **Color** (for flower, leaf, autumn leaf, and fruit), **Height** and **Blooming Season**.

The **Plant Care Calendar** page lets you select the **Complexity of Care** required, **Speed of Growth** (for both height and spread), **Life Expectancy** and **Usage**.

The **World Map** page lets you select the region of the world where the plants

originate. For example, if you wanted to find plants for an Asian-themed water garden, you would click on the Asian region of the map to exclude any plants that aren't indigenous to Asia.

The **Notebook** page lets you filter plants by notes that you've entered previously on this page. For example, you could enter the note "Front Yard" for all plants that you want to use in your front yard. When you are ready to lay out the front yard of your landscape plan you can go back to the **Plant Filter** and limit your plant list to only the plants you've pre-chosen for your front yard.

The **Picture** page lets you limit your plant list by the part of the plant shown in its photo (leaf, bark, fruit, etc.).

The filter option available on the **Diseases** page is different, because it affects the disease list, not the plant list. To use this filter, click on the image that represents the part of the plant affected or type of infestation, then select the **Encyclopedia** tab on the left side of the window to switch to the regular **Diseases** page. For example, if you are considering planting lilies or daffodils in your garden, and want to know what type of diseases these bulb plants may encounter, click the Bulb image on the Diseases page (in Plant Filter mode), then go into Encyclopedia mode and select the **Diseases** page.

3. Select the filter criteria. Each icon and scale represents a specific plant criterion. As soon as you click on an icon or move a slider, filtering begins. To deselect an icon, click on it again.

Note: If some of the icons disappear, it is because no such plant is selectable within the current criteria. For example, if you select minimal water, the climber plant type icon will disappear because there are no climbing plants that will accept minimal watering.

If you select more than one icon within a single group, then all plants with any of the checked properties will be selected. For example, selecting maximum light and medium light will exclude all plants that

- flourish under minimal light (shade) conditions. If icons/sliders of more than one type are checked/moved, then plants that satisfy all the chosen criteria will be selected. For example, if you click on the deciduous tree icon in the Type box, the full sun icon in the Lighting Preference box, and the white square on the Color box, then only hardwood trees that flourish in full sunlight, require minimal watering, and produce white flowers will be selected.
4. The total number of plants available— based on the filters you have applied—is indicated on the leaf in the upper right corner of the window. If at any time you want to restore the complete list of plants, click **Reset**.
 10. Specify the remaining properties (**Quantity** or **Behavior**) if desired, then click **OK** in the **Plants** dialog. Note that the settings on the **Appearance** page have no effect on the plant's appearance. The appearance of a plant is determined by settings in the Encyclopedia.
 11. Click **OK** in the **Catalog Manager** dialog. The plant is added to your catalog.

Adding a Plant from the Encyclopedia to the Catalog

Although the catalog contains a vast array of plants for you to insert, it does not contain all the plants listed in the Plant Encyclopedia.

You can add any plant from the Plant Encyclopedia to any catalog by following the steps below.

To add a plant from the encyclopedia to the current catalog:

1. Select **File > Catalogs > Catalog Manager**.
2. In the **Catalog Manager** dialog, select **Plants** from the *Element* drop box.
3. In the *Select a Type* window, select or create the group you want to add the plant to.
4. Select **Catalog > Add Element**.
5. In the **Plants** dialog, select the Plant Info tab.
6. Click the **Encyclopedia** button to launch the Plant Encyclopedia.
7. On the Encyclopedia's main page, select the desired plant in the plant list.
8. Click **Select**. Notice that the Plant Info page of the **Plants** dialog is now full with the selected plant's information.
9. In the **Name** edit box, specify a name for your plant (disable **Auto Name** if you want to type in the name yourself).

Part 6

Drawing & Editing Tools

Drawing Aids	page 129
Measurement	page 133
Commander	page 137
Editing Your Design	page 143

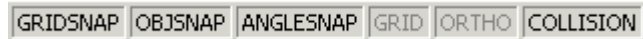
Chapter 21

Drawing Aids

3D Home Architect® Landscape Design offers a variety of powerful drawing tools that help you insert elements easily and precisely where you want them in your drawing.

If you want you can display a drawing grid in your drawing area, as well as set up a snap grid so that your cursor snaps to the grid when you are inserting elements. The Object Snap feature automatically snaps your pointer to existing objects, and the Angle Snap snaps your pointer to specified angles.

You can set up drawing aids in your program settings, and toggle them on and off using the buttons on the Status bar.



Setting Up a Drawing Grid

A drawing grid is simply a set of horizontal and vertical lines that can help you orient objects to one another. By default, the spacing between grid lines is 1', but you can change this if you want. Note that the drawing grid is a visual aid only, and will not be included in printouts.

To set up a drawing grid:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the *Grid* area, specify the desired distance between vertical grid lines in the **X Spacing** edit box.
4. Specify the desired distance between horizontal grid lines in the **Y Spacing** edit box.
5. By default, the grid is 150' x 150', which is the default size of the terrain. To change the overall size of the grid, enter the desired width in the **X Limit** edit box, and the desired height in the **Y Limit** edit box.
6. If you want to turn the grid on, check the **Enable (F7)** check box.
7. Click **OK**.

Turning the Drawing Grid On and Off

You can toggle the drawing grid on and off in one of two ways:

- Press **F7** on your keyboard
- Click the **GRID** button on the Status bar



Using the Grid Snap

The Grid Snap feature snaps your pointer to an invisible grid when inserting elements. By default, the spacing between the grid lines in the invisible grid is 1", but you can change this if you

want. If you enable the **Match Grid** option, the invisible snap grid becomes the same size as the drawing grid. This will make it seem like you are snapping to the drawing grid while drawing.

To set up a snap grid:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. If you want the snap grid to be the same size as the drawing grid, check the **Match Grid** check box in the *Grid Snap* area.
4. To specify a custom distance between vertical grid lines, enter a value in the **X Spacing** edit box.
5. To specify a custom distance between horizontal grid lines, enter a value in the **Y Spacing** edit box.
6. If you want to turn the grid snap on, check the **Enable (F4)** check box.
7. Click **OK**.

Turning the Grid Snap On and Off

You can toggle the grid snap on and off in one of two ways:

- Press **F4** on your keyboard
- Click the **GRIDSNAP** button on the Status bar



Using the Object Snap

The Object Snap feature makes elements that you are currently inserting automatically snap to existing elements in your drawing.

You can set the pixel search distance for the object snap, which determines how close your pointer needs to be to an element for it to snap to the element.

By default, the Object Snap is enabled, but you can turn it off whenever you want. There are three ways to turn the Object Snap on or off.


To turn the Object Snap on or off:

- Press **F5** on your keyboard
- Click the **OBJSNAP** button on the Status bar



- Select **Settings > Program Settings**, then on the Drawing Aids page, check or uncheck the **Enable (F5)** check box in the *Object Snap* area

To set the pixel search distance:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the Object Snap area, type the desired number of pixels in the **Pixel Search Distance** edit box, or use the arrows to scroll up or down through a list of values.
4. Click **OK**.

Using Ortho

The **Ortho** feature restricts your cursor movement to 90-degree angles when you are inserting elements. This can be especially helpful when drawing elements like pads and retaining walls.

By default, Ortho is enabled. You can toggle it on and off using one of three methods.

To turn Ortho on or off:

- Press **F8** on your keyboard
- Click the **ORTHO** button on the Status bar



- Select **Settings > Program Settings**, then on the Drawing Aids page, check or uncheck the **Ortho (F8)** check box

Using Angle Snap

When the **Angle Snap** feature is turned on, your cursor snaps to specific angles when rotating an element. If you set your snap angle to 10°, for example, your cursor will snap at 10° intervals as you rotate the element.

By default, the Angle Snap is on. You can turn the Angle Snap on and off using one of three methods.


To turn the Angle Snap on or off:

- Press **F6** on your keyboard
- Click the **ANGLESNAP** button on the Status bar



- Select **Settings > Program Settings**, then on the Drawing Aids page, check or uncheck the **Angle Snap (F6)** check box

To change the snap angle:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the *Ortho / Angle Snap* area, type the desired snap angle in the **Snap Angle** edit box, or use the arrows to scroll up or down through a list of values.
4. Click **OK**.

Disabling/Enabling Collision Control

The program's intelligent **Collision Control** feature prevents objects from being inserted where they do not fit. By default, Collision Control is on, but you can turn it off whenever you like using one of three methods.

To turn Collision Control on or off:

- Press **F9** on your keyboard
- Click the **COLLISION** button on the Status bar



- Select **Settings > Program Settings**, then on the Drawing Aids page, check or uncheck the **Enable Collision Control (F9)** check box

Note: Collision Control does not affect landscape elements. It does, however, affect building elements on the current building location if you have opened a drawing from another *3D Home Design* program that contains building elements.

Chapter 22

Measurement

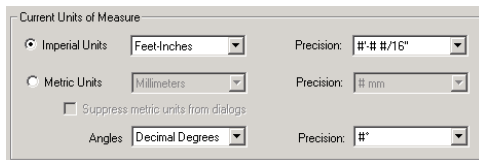
You can change the unit of measure used in a drawing, or select a different level of precision for your measurements.

You can measure the distance between any two points using the Measure tool. If you have opened a project from another 3D Home Design program which contains a house, you can use the Area/Perimeter tool to instantly calculate the area of a room or building.

Changing the Unit of Measure

The units of measure used in your project are determined by a template, which by default is either a feet/inches template or millimeters template.

Once you've opened a new project, you can change the units of measure and levels of precision used in that project by making selections on the Units of Measure page of the **Program Settings** dialog.



To set your units of measure:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the Units of Measure tab.
3. Select either **Imperial Units** or **Metric Units**, then select the desired units to use.

Measure	Units Available
Imperial	Feet-Inches Inches
Metric	Millimeters Centimeters Meters

4. Select a level of precision for each unit of measure. For example, selecting #'-# #/16" sets the level of precision to 1/16th of an inch when working in feet and inches.
5. Once you've set your units of measure, click **OK**.

Suppressing Metric Units in Dialogs

If you have chosen to work in Metric units, you can choose to suppress units for length/distance, volume, and area measurements shown in dialogs. For example, 1200 mm would appear as simply 1200.

To suppress units:

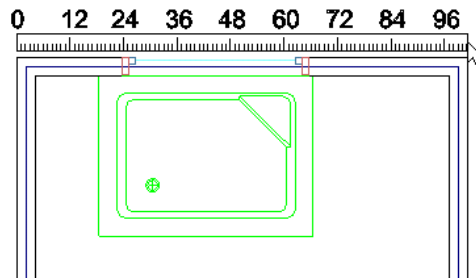
1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the Units of Measure tab.
3. With **Metric Units** selected, enable the **Suppress metric units from dialogs** check box.
4. Click **OK**.

Measuring Distances

Use the Measure tool to measure the distance between any two points in your 2D plan.

To use the Measure tool:

1. Select **Tools > Measure**.
2. Click your first point on the screen.
3. Move your cursor in the direction you want to measure. A ruler is displayed that stretches as you move your cursor.



4. Click your second point on the screen. The distance is shown on the ruler as well as on the Status bar at the bottom of the screen.
5. Once you have measured your first distance, you can keep selecting points to measure

additional distances from the last point selected. A running total is displayed on the Status bar.

<Distance: 6'-10", Total Distance: 12'-8" >

- When you are done viewing the area calculations, click **OK**.

- When you have finished measuring, right-click and select **Finish**.

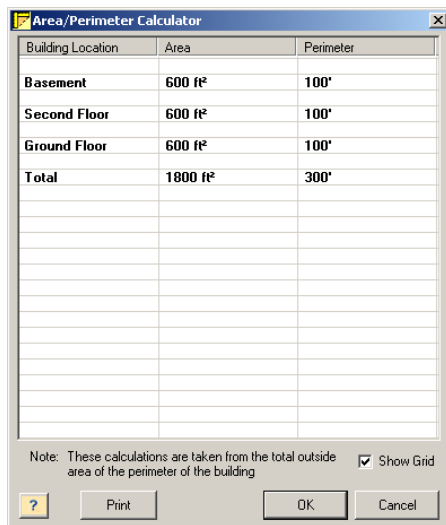
Measuring Area and Perimeter

The **Area/Perimeter Calculator** displays the area (e.g. square footage) and perimeter length of each location in your model. It also displays the total area and total perimeter (of all locations). This tool can only be used if you have opened a project from another *3D Home Design* program which contains a house.

Note the calculations are taken from the exterior side of the building's walls.

To measure area:

- Select **Tools > Calculate/Estimate > Area/Perimeter**.



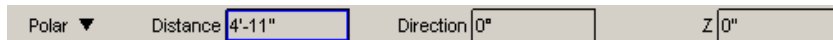
- To turn the grid lines off, uncheck the **Show Grid** check box.
- To print the calculations, click **Print**.

Chapter 23

Commander

For very precise control when inserting or editing elements, *3D Home Architect® Landscape Design* offers a helpful tool called the Commander, which lets you view or enter exact values for distance, direction and angles. It is especially handy for users with some CAD experience.

This chapter tells you how to turn the Commander on, and how to use it.




Displaying the Commander

The Commander is a multi-functional tool that lets you enter precise values when inserting or editing elements. Even if you don't need a high level of precision, you may want the Commander displayed so you can see lengths and angles as you draw or edit elements.



To display the Commander:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Workspace tab.
3. Check the **Commander** check box.
4. Click **OK**.

The Commander is displayed just below the drawing area, above the toolbar area. Initially the Commander will look grayed out because it is inactive. It will become active when you insert or edit elements.

Using the Commander

The Commander can be a very useful tool when inserting or editing elements. Using the Commander you can:

- Specify the insertion height of an element before it is inserted
- Select a precise insertion point for an element
- Specify a precise length and direction for elements like retaining walls and edging
- Specify a precise distance and direction when stretching or moving an element
- Specify a precise angle when rotating an element
- Specify a precise radius/included angle when curving a wall or deck

Even if you don't want to enter precise values, you can still use the Commander to view measurements as you draw and edit elements. The values in the Commander are linked to your cursor movement and update as you proceed through a command.

The Commander becomes instantly active when inserting elements. It is most useful for things like retaining walls and edging, because it lets you enter a precise length for the element.


The Commander also becomes active when you are moving, stretching or rotating elements. If you have started moving, stretching or rotating an element using your mouse, the Commander displays the move distance or rotation angle as you move your mouse. If you want to be able to enter values in the Commander when moving, stretching or rotating an element, you need to first select an appropriate editing tool from the right-click menu or Edit > Modify Elements menu such as Move, Stretch, Lengthen, or Rotate.

Displaying the Coordinate Icon

The Coordinate Icon marks the current point from which an action will be performed. In other words, it identifies the current reference point when using the Commander. By default, this icon is turned off. If you plan to use the Commander while working, you should turn on the Coordinate Icon.



To display the Coordinate Icon:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the *Visual Aids* area, check the **Show Coordinate Icon** check box.
4. Click **OK**.

Specifying the Insertion Height of an Element Before You Insert It

If you have the Commander turned on, it will display a **Base Height** edit box as soon as an insertion tool becomes active.



The value shown in the **Base Height** edit box is the height at which the element will insert in your drawing. You can change the insertion height

before selecting an insertion point for the element by typing a value in the **Base Height** edit box and pressing ENTER. The distance is measured from the terrain to the element's insertion point. Most elements have their insertion point at the bottom of the element.

Selecting a Reference Point When Inserting and Editing Elements

To use the Commander, you must first specify a reference point, or base point, from which values can be measured. If you are drawing a retaining wall, for example, the first point you click on the screen is considered the reference point. The Commander then becomes active, and you can enter a Distance and Direction (or X and Y values) for the wall.

If you want to use the Commander to edit an element (e.g. move or rotate it), you must select a point from which to measure the move distance/direction, or rotation angle. Most often you would select one of the element's grab handles, which are the small blue squares that appear on the major points of an element when you select the element.

There are two ways to select a reference point once you've activated a tool:

- Click the point in your drawing.
- Enter coordinates, or X, Y and Z values, in the Commander. (See *Defining Points in the Cartesian Coordinate System* on page 140.)

Note that even if you choose to click the point in your drawing, you can see the coordinates of your cursor in the Commander as you move your mouse.

By default, coordinates are read from the last point selected in the drawing area. This point is marked by the Coordinate Icon (if enabled).

Entering Values in the Commander

The Commander is intelligent and changes depending on the tool you are using. For example, if you are drawing retaining walls, the Commander's edit boxes become **Distance**, **Direction**, and **Z**. If you are curving walls,

however, the edit boxes change to **Radius** and **Included Angle**.

You can move easily from one edit box to the next using your Tab key. Pressing ENTER after typing a value completes the current action.

When entering values in the Commander, especially when inserting or moving elements, it is important to be aware of the current coordinate system in the Commander.

The Commander offers two coordinate systems: Polar and Cartesian. The system you select determines how values are entered in the Commander when you are specifying points or distances.

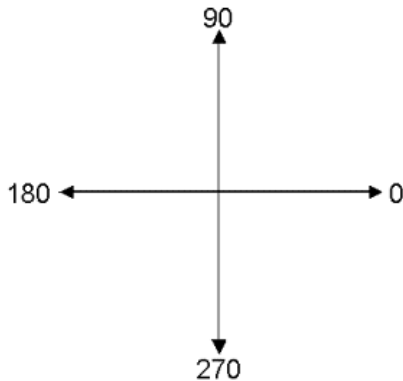
Note that you can switch between the Polar and Cartesian coordinate system once you have selected a reference point to draw from or move from. You do this by making a selection from the coordinate system drop box on the left side of the Commander.

Note: If moving, stretching or rotating elements, and you want to enter values in the Commander, you need to first select an appropriate editing tool from the right-click menu or Edit > Modify Elements menu such as Move, Stretch, Lengthen or Rotate.

Direction and Angle of Rotation

Direction in a drawing is specified in degrees of an angle. The angle is calculated counterclockwise from the positive X axis.

The Four Primary Drawing Directions



Although the four primary drawing directions are the ones you will probably be working with the most, any angle is possible. If you disable Ortho and Angle Snap, and move an element randomly in your drawing area, there is no restriction on angles at all. Even if Ortho and Angle Snap are enabled, you can enter any angle you want in the Commander.

Defining Points in the Cartesian Coordinate System

Initially when you start an insertion or editing command, the coordinate system is set to Cartesian. This lets you specify a precise reference point to draw or move from by entering X, Y and Z coordinate values in the Commander.



X. Enter an X coordinate to specify a horizontal (left/right) distance in 2D plan view.

Y. Enter a Y coordinate to specify a vertical (up/down) distance in 2D plan view.

Z. Enter a Z coordinate to indicate elevation, or height above the terrain.

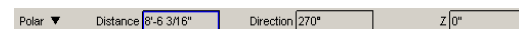
Remember that the coordinates are measured from the current reference point, which is marked by the Coordinate Icon. (See *Entering Values in the Commander* on page 139.)

In the Cartesian system, you can enter both positive and negative values for any of the coordinates.

Specifying Distance and Direction in the Polar Coordinate System

The Polar coordinate system becomes active once you have selected a reference point to draw from, or start a move from.

In the Polar coordinate system, you specify a distance and direction (angle) when drawing or moving an element.



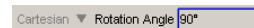
Distance. Enter a positive value to specify the length of the element, or the move distance.

Direction. Enter the direction you want the element to run, or the direction in which you want to move an element. For information about how direction is specified, see *Direction and Angle of Rotation* on page 140.

Z. Enter the distance you want to move the element vertically. You can enter a positive or negative value to move the element up or down.

Using the Commander When Rotating Elements

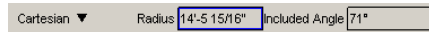
When you select the Rotate tool from the right-click menu or Edit > Modify Elements menu, then select a base point for the rotation, the Commander displays a **Rotation Angle** edit box.



To specify the desired angle of rotation for the element, type the angle in the **Rotation Angle** edit box and press ENTER. For information on how angles are measured, see *Direction and Angle of Rotation* on page 140.

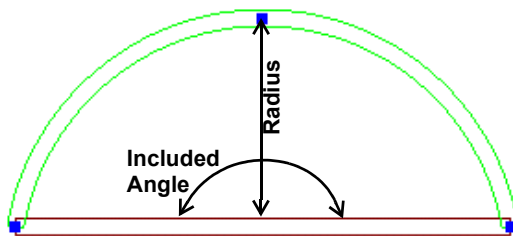
Using the Commander When Curving Elements

When curving an element such as a wall or deck, you can use the Commander to specify a precise curve angle.



Radius. The distance from the element (in its uncurved state) to the center point of the curve.

Included Angle. The angle formed between two radius lines extending from the center of the circle implied by the curve out to the endpoints of the arc. The larger the angle, the rounder and larger the curve.



It is not necessary to enter both the Radius and Included Angle values. If you enter one, the program automatically supplies the other. Also, if you enter a value and nothing happens after you press ENTER, then the value is not valid in relation to the dimensions of your element.

Chapter 24

Editing Your Design

When you double-click after inserting an element or select **Finish** from the right-click menu, you automatically go into Selection Mode, meaning you can select elements in your drawing area and edit them.

Most elements can be moved, rotated, copied and deleted. Some elements have additional editing commands available. For example, you can lengthen, break and curve walls. All elements have a property sheet where you can change the size or appearance of the element.


To access a menu of editing commands for a selected element, just right-click in the drawing area or select **Edit > Modify Elements**. Certain functions can be performed without selecting any commands at all. For example, you can move and rotate most elements by simply clicking and dragging your mouse.

This chapter describes how to select elements, and use general editing commands like Move, Rotate, Elevate, Duplicate and Delete. It also describes how to access and edit element properties. For information about editing a specific type of element, see the chapter about that element.

Undoing the Previous Action

The Undo tool cancels your most recent action. You can undo as many actions as you have taken since your last save.

To undo an action:


- Select **Edit > Undo**, or
- Click the Undo button on the Standard toolbar, or 
- Press **Ctrl+Z**

Tip: You can use the Redo tool to reapply an action you have canceled using the Undo tool.

Redoing an Undo

The Redo tool reapplies a tool that you have reversed using Undo. Redo will only work directly following an Undo.

To redo a task:

- Select **Edit > Redo**, or
- Click the Redo button on the Standard toolbar, or 
- Press **Ctrl+Y**

Accessing Edit Commands

When you have an element selected, you can access a menu of edit commands by right-clicking in the drawing area, or by selecting **Edit > Modify Elements**.

Menus vary depending on the element selected. Typical commands are Properties, Move, Rotate, Duplicate, and Delete. If two types of elements are selected (such as a floor and a wall), only commands that are common to both element types are available.

Certain functions can be performed without selecting any commands at all. For example, you can move and rotate most elements by simply clicking and dragging your mouse.

Moving Elements

When you select an element, you are automatically in Drag and Drop mode. If the element is a singular, one-click object, like a plant,


you can move the element by simply clicking and dragging it. If you want to move an area-drawn element, such as a pad, you need to select the Move Whole Element tool before clicking and dragging. Otherwise, doing a straight drag-and-drop will only stretch it.

If you have your Commander turned on and would like to be able to enter precise values for the move, you need to select the Move tool instead of doing a straight drag-and-drop.

Doing a Straight Drag-and-Drop

The straight drag-and-drop method is ideal for singular, one-click elements like cabinets and plants.

To move an element using drag-and-drop:

1. Select the element you want to move. You are now in Drag and Drop mode.
2. Hover your pointer over the element's center grab handle to display the Move cursor. 
3. Click and drag to move the element.
4. When the element is where you want it, release the mouse button.

Using the Move Tool

Use the Move tool when you want to be able to specify a precise distance and direction for the move in the Commander.

To move an element using the Move tool:

1. Select the element you want to move.
2. Right-click and select **Move**, or select **Edit > Modify Elements > Move**.
3. Select a base point for the move. The move distance and direction will be measured from this point.
4. Without holding your mouse button down, move your mouse to move the element. Select the point you want to move the element to, or enter a distance and direction in the Commander.

Raising or Lowering an Element

Most elements can be raised or lowered using the Elevate tool on the element's right-click menu.

Many block elements (like furniture and plants) also have a **Distance above current location or terrain** variable in their properties that you can use to raise or lower the element.

To raise or lower an element using the Elevate tool:

1. Select the element you want to raise or lower.
2. Right-click and select **Elevate**, or select **Edit > Modify Elements > Elevate**. The value shown in the **Elevate** dialog is the current elevation of the element.
3. In the **Elevate** dialog, specify the desired elevation of the element above the terrain. The distance you enter is the distance from the terrain to the insertion point of the element. For most elements, the insertion point is at the base of the element.
4. Click **OK**.

To raise or lower a block element by editing its properties:

1. Select the element you want to raise or lower.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the properties dialog, select the Behavior tab. If there is no Behavior tab, you will need to use the Elevate tool to raise or lower the element.
4. Edit the value in the **Distance above current location or terrain** edit box.
5. Click **OK**.

Rotating Elements in 2D Plan View

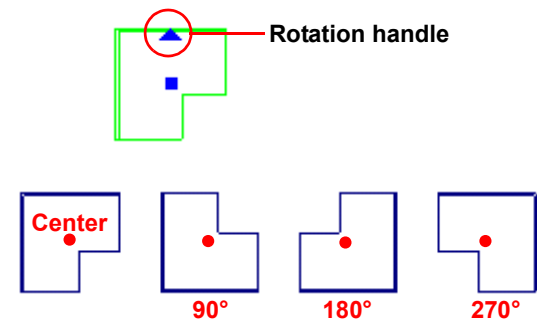
Singular, one-click elements like plants and furniture can be rotated on the spot by simply clicking and dragging them while in Rotation mode.

For other elements such as retaining walls and pads, you need to use the Rotate tool. You also need to use the Rotate tool if you want to be able

to enter a precise rotation angle in the Commander, or you want to rotate the element about a point other than the center point of the element.


Doing a Simple, On-the-Spot Rotation

If you see a triangular grab handle on an element when it is selected, it can be rotated by simply clicking and dragging it. Using this method, the element is rotated about its center point.



If your Angle Snap is on, the element will rotate in increments of whatever angle is set for the Angle Snap. If the Angle Snap is off, the element will rotate in increments of 1°.

To rotate an element by clicking and dragging:

1. Select the element you want to rotate.
2. Hover your pointer over the triangular grab handle to display the Rotate cursor. If you do not see the triangular grab handle, the element can only be rotated with the Rotate tool. 
3. Click and drag to rotate the element.
4. When the element is at the desired rotation, release your mouse button.

Tip: If the square grab handle is in close proximity to the triangular grab handle, you may want to zoom in on the element to distinguish between the two grab handles.

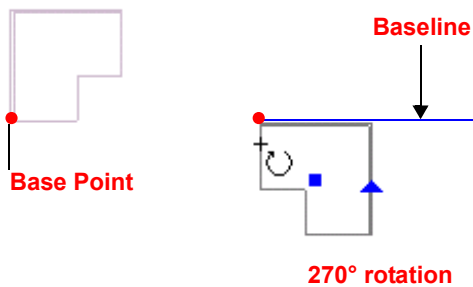
Using the Rotate Tool

Using the Rotate tool you can rotate an element about any selected base point. You should also use the Rotate tool if you want to be able to enter a precise rotation angle in the Commander.

If your Angle Snap is on, the element will rotate in increments of whatever angle is set for the Angle Snap. If you are using the Commander, you can override the Angle Snap by entering the desired angle in the Commander. If the Angle Snap is off, the element will rotate in increments of 1°.

To rotate an element using the Rotate tool:

1. Select the element to rotate.
2. Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
3. Select a base point for the rotation. The base point can be any point on the element (e.g. center point or corner point), or any point in the drawing area. The point you pick establishes an automatic baseline that runs through the point at 180°. You can rotate full-circle around this baseline.



Tip: If you want to align an element with another element that may be lying at an odd angle, select a base point on the other element, then line up your rotation line with that element.

4. Without holding your mouse button down, move your mouse to rotate the element. The element will rotate from the defined base point in the direction you move the mouse. If the Commander is turned on, you can view the angle of rotation as you rotate, or enter a

precise angle. Positive angle values are read in a counter-clockwise direction, while negative values are read in a clockwise direction.

Changing an Element's Orientation

Symbol elements, such as furniture and light fixtures, are oriented in a logical fashion when you insert them in your drawing. You can edit the orientation of most symbol elements.

To change an element's orientation:

1. Select the element.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Basic property page, click the appropriate arrow keys in the *Orientation* area to rotate the element.
(Y, Z) axes: Rotates the element front to back, and vice versa.
(X, Z) axes: Rotates the element towards its left or right side in 3D.
(X, Y) axes: Rotates the element left or right in 2D plan view.

Copying Elements

The Duplicate tool creates a copy of a selected element that you can then position where you like in your plan.

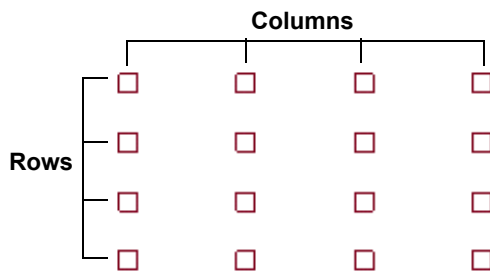
To duplicate an element:

1. Select the element to copy.
2. Right-click and select **Duplicate**, or select **Edit > Modify Elements > Duplicate**.
3. Select a base point for the copy movement. Typically you would select one of the element's grab handles, but you can click anywhere in the drawing. The base point is simply a reference point used to define the move distance.
4. Select the point you are copying the element to. You can do this by moving your mouse and then clicking to insert the copy, or by

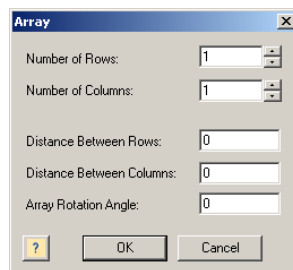
typing a distance and direction in the Commander.

Arraying Elements

When you array elements, you create multiple copies of an element at the same time. You can create an array in a single row or column, or a layout of rows and columns. You can also control the spacing between elements in the array, and the array's rotation angle.



Sample array of boxes



To array an element:

1. Select the element you want to array.
2. Right-click and select **Array**, or select **Edit > Modify Elements > Array**.
3. In the **Number of Rows** box, type the number of horizontal rows you want or use the arrows to select a value.
4. In the **Number of Columns** box, type the number of vertical columns you want.
5. In the **Distance Between Rows** box, type the spacing you want between rows. This determines the distance between elements appearing in columns (vertical spacing).

6. In the **Distance Between Columns** box, type the spacing you want between columns. This determines the distance between elements appearing in rows (horizontal spacing).

Note: If you are working in Imperial, make sure you include the feet symbol (e.g. 4') if the value is in feet. Otherwise, the value is taken as inches.

7. In the **Array Rotation Angle** box, type the degree of rotation for the array.
8. Click **OK**. The array is created.

Note: The Array tool is only available for certain elements.

Deleting Elements

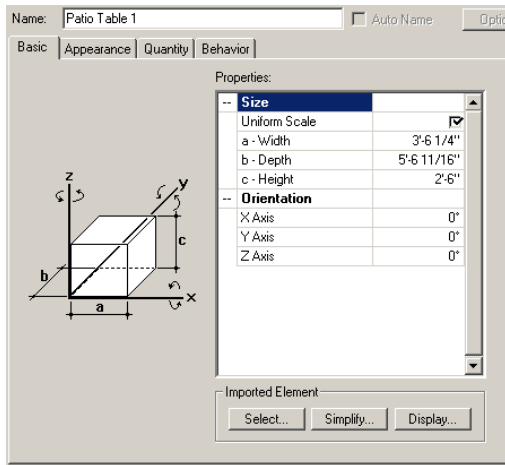
You can delete an element from your drawing in two quick steps.

To delete an element:

1. Select the element.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Editing the Size and Composition of an Element

You can edit the physical make-up of an element as well as its dimensions by accessing the element's Basic property page. Some elements have additional property pages that control its composition.



When you edit the properties of elements that exist in your drawing, only selected elements are changed. Other occurrences of the element in your drawing remain unchanged. You can, however, select and edit multiple elements at the same time provided they share the same properties.

To edit the properties of an inserted element:

1. Select the element you want to edit. To select multiple elements, use Shift + click.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Adjust the properties as desired. Clicking a dimension marked with an alphabetical character (a, b, c, etc.) highlights the corresponding dimension in the element graphic, and vice versa, if one exists.
4. Click **OK**. The selected elements are updated in the drawing.

Note: Editing the properties of an element in your drawing has no effect on the element's property definition in the catalog it came from. If you want to edit an element in a catalog, see *Adding and Editing Elements in a Catalog* on page 223. Editing an element in a catalog affects all future insertions of that element in your drawing.

Changing an Element's Material or Color

When you view your design in Rendered or Patterned mode, elements are displayed using materials that are defined in the elements' properties. A material can be a texture, such as brick, or a color. Materials also have a pattern assigned to them, which is what you see when you view in Patterned view. You can select a different material for each of an element's components.


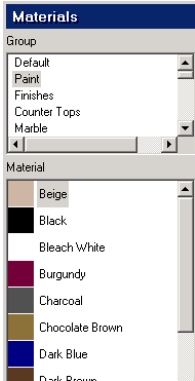
Note: You can't change the way an element looks in 2D plan view.

There are two ways to change an element's material settings: using the Materials Paintbrush, or through the element's Appearance property page.

The Materials Paintbrush is best used in 3D view. It lets you select a material or color in the catalog, then apply it to parts of an element. For example, if you want your table legs to be blue, you can select the Blue Paint material, then click on of the table's legs. All table legs will update automatically. When you use the Materials Paintbrush on an element, the settings on the element's Appearance property page update to match the selections you made with the Materials Paintbrush.

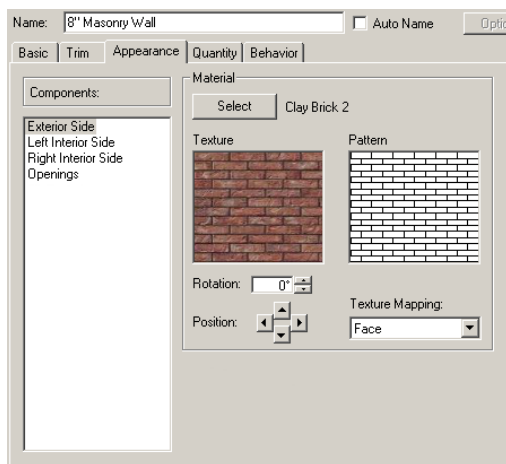
If you choose to edit an element's material through its Appearance property page, you can select different materials for each of the element's parts, rather than just a selected part. It doesn't matter if you're in a 2D view or 3D view.

To use the Materials Paintbrush:

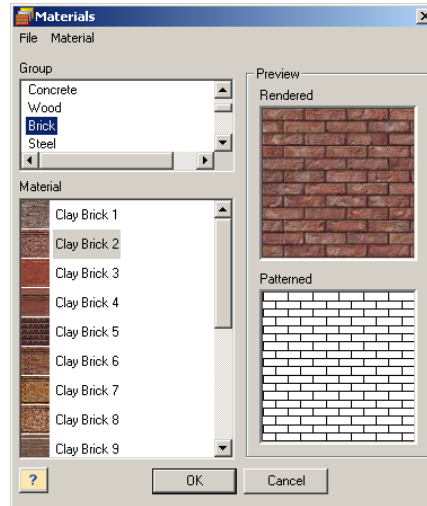
1. Select **Edit > Materials Paintbrush**, or click the Materials Paintbrush button  on any tabbed toolbar.
2. In the catalog panel, select the material you want to apply. There is an incredible selection to choose from, including Wood, Brick, Marble, Concrete, Steel, Carpet, Tile, Roofing and Fabric. If you want to apply a solid color select something from the Paint category. 
3. In 3D view, click on the element part that you want to apply the material to. The material is immediately applied.
4. Right-click and select **Finish**.



To change an element's material through the Appearance property page:

1. Select the element you want to edit. To select multiple elements, use Shift + click.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Select the **Appearance** tab.



4. In the *Components* pane, select the component whose material you want to change.
5. In the *Material* area, click the **Select** button.



6. In the **Materials** dialog, select the group containing the desired material. If you want to choose a solid color, select the Paint group.
7. Select the material you want to use. The swatches in the preview windows update automatically. If you want to edit the material, click on one of the swatches to access the **Edit Materials** dialog. For information about editing materials, see *Editing Material Properties* on page 237.
8. Click **OK** to return to the Appearance page.
9. If you want to rotate the material on the element, enter an angle in the **Rotation** edit box, or use the arrows to scroll through a list of angles. This rotates the material in a clockwise direction. 
10. To shift the material on the element (left, right, up or down), use the **Position** arrows. 
11. Select another component in the *Components* pane and select a material for that component.

12. When all your materials are defined, click **OK**.

Note: When you edit the material of an element in your drawing, the element's material definition in the catalog does not change. The change only applies to the selected element. If you want to change the element's properties in the catalog, see *Adding and Editing Elements in a Catalog* on page 223.

Part 7

Power Tools

Photo Boards	page 153
Text & Dimensions	page 159
Project Estimate	page 169
3DTrueView™	page 173

Chapter 25

Photo Boards

3D Home Architect® Landscape Design lets you import digital photographs or scanned images into your work space. The image is oriented vertically in 3D view, much like a billboard. You could, for example, import a picture of your family pet and place it in your backyard.

A photo board can be stationary or set to rotate with the camera so it's always facing you. You can also control the height and width of the photo board.

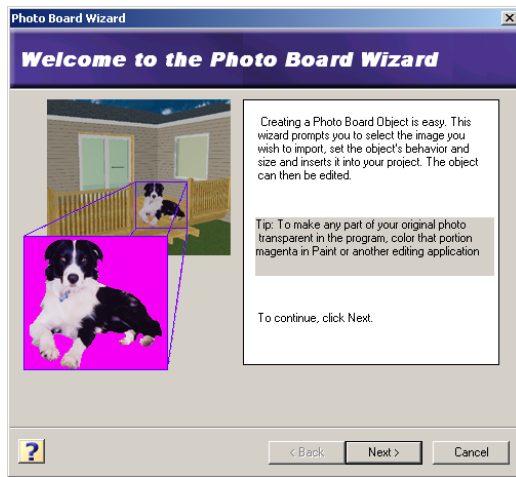
The handy **Photo Board Wizard** steps you through the process quickly and easily.

Importing a Photo Board

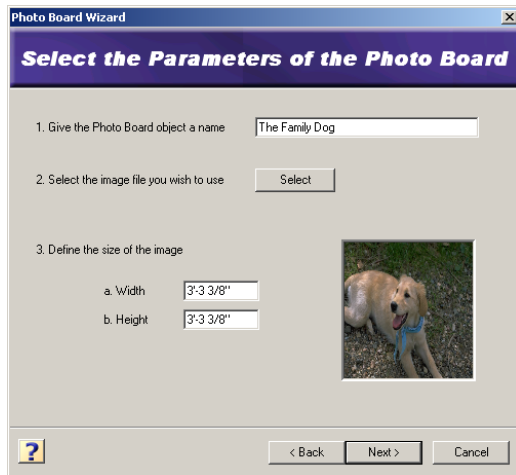
A photo board is simply a digital image that is oriented vertically in your 3D workspace. You can import any image you want — your family, pets, house — the only limit is your imagination. The handy Photo Board Wizard does it all in a few quick steps.

To import a photo board:

1. Select **File > Import > Photo Board Wizard**.



2. Click **Next**.



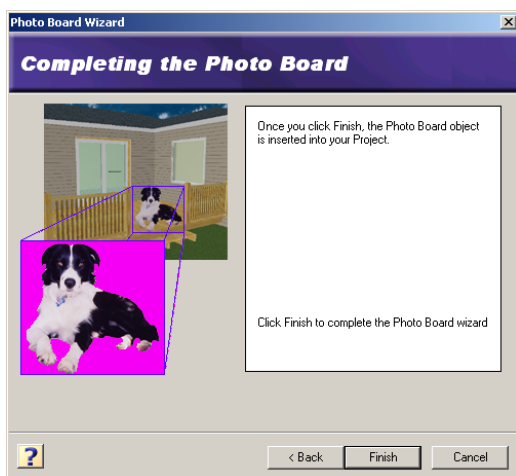
3. Type a name for your photo board.

4. Click the **Select** button, then select the image you want to import. You can import BMP, JPG and TGA files. The image is displayed in the preview window.
5. Define the size of the image by entering values in the **Height** and **Width** edit boxes. Generally you should specify a size that is as close to reality as possible. For example, if the image is of a person who is six feet tall, you should enter a value close to 6' in the **Height** edit box.
6. Click **Next**.



7. Specify whether you want the photo board to be stationary or active. If **Stationary** is selected, the board will always remain oriented the same way, regardless of changes in your camera angle. If **Billboard** is selected, the photo board will rotate toward the camera so it will always face you in 3D.

- Click **Next**.




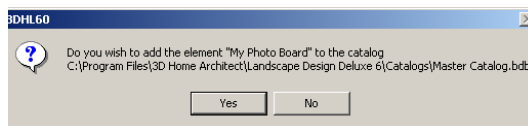
- Click **Finish**. The photo board is attached to your cursor, ready to be inserted.
- Position the photo board where you want it, then click to insert it.
- Right-click and select **Finish**.

Adding an Imported Photo Board to Your Catalog

You can save a photo board that you have imported using the Photo Board Wizard to your catalog so you can insert it again in any project.

To save your photo board to the current catalog:

- Select **File > Catalogs > Save Element to Catalog**. Your pointer changes to a catalog cursor. 
- Click on the photo board in your drawing.



- Click **Yes** to save the photo board. The photo board is added to the current catalog.

Inserting a Photo Board from the Catalog

The catalog contains a collection of photo boards containing pictures of animals. If you have saved your imported photo board to the catalog, it is also displayed with the existing photo boards in the catalog.


To insert a photo board from the catalog:

- Select **Insert > Photo Board**.
- In the catalog panel, select the photo board you want to insert.
- Position the photo board where you want it, then click to insert it.
- Right-click and select **Finish**.

Moving a Photo Board

You can move a photo board easily by just clicking and dragging it.

To move a photo board:

- Select the photo board.
- Hover your pointer over the board to display the Move cursor. 
- Click and drag to move the board.
- When the board is where you want it, release your mouse button.

Rotating a Photo Board in 2D Plan View

You can use the Rotate tool to rotate a photo board about a selected point in 2D plan view.

To rotate a photo board:

- Select the photo board.
- Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
- Hover your pointer over the point you want to rotate the photo board around.
- Click and drag to rotate the photo board, then release your mouse button.

Changing the Elevation of a Photo Board

You can raise or lower a photo board using the Elevate tool on the right-click menu.

To raise or lower a photo board:

1. Select the photo board.
2. Right-click and select **Elevate**, or select **Edit > Modify Elements > Elevate**. The value shown in the **Elevate** dialog is the current elevation of the photo board.
3. In the **Elevate** dialog, specify the desired elevation of the photo board above the terrain.
4. Click **OK**.

Tip: You can also change a photo board's elevation by changing the **Distance above current location or terrain** variable on the photo board's Behavior property page.

Changing a Photo Board from Stationary to Rotating and Vice Versa

You can choose whether a photo board is stationary or rotating after it has been inserted. A stationary board keeps the same orientation regardless of changes in the camera angle. A rotating board always rotates towards the camera.

To change a photo board's type:

1. Select the photo board.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the *Type* area, click **Stationary** for a stationary photo board, or **Billboard** for a rotating photo board.
4. Click **OK**.

Editing the Size of a Photo Board

You can edit the height and width of a photo board after it has been inserted.

To edit the size of a photo board:

1. Select the photo board.

2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. Edit the **Height** or **Width** in the Properties area. If **Maintain Aspect Ratio** is checked, the height will automatically change if you edit the width, and vice versa. This ensures the image doesn't get distorted.
4. Click **OK**.

Deleting a Photo Board

You can delete a photo board in a couple of easy steps.

To delete a photo board:

1. Select the photo board.
2. Press the **Delete** key on your keyboard, right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Creating Transparency in Photo Board Images

You may find that you want to make portions of your photo board image transparent for a more realistic effect. If the image is of a person, for example, you may want to make the background in the image transparent so that when you insert the photo board in your drawing, you see just the person in your 3D view.

To create transparency in your photo board image, you need to use a graphic editing program such as Microsoft® Paint to apply a magenta color to those portions you want to make transparent.



The RGB color settings for magenta are as follows:

Red: 255 **Green:** 0 **Blue:** 255

Once you have finished editing the image in the graphic editing program, you can re-import the image into *3D Home Architect® Landscape Design* using the Photo Board Wizard.



Photo board with no transparency



Photo board with transparency

Chapter 26

Text & Dimensions

Using text tools you can add text to any area of your drawing. You may want to add a title to the plan, or label areas or specific elements. You can use whatever fonts and colors you want.

Dimensions are used to convey precise measurements. You can quickly insert linear and aligned dimensions with a few simple mouse clicks.

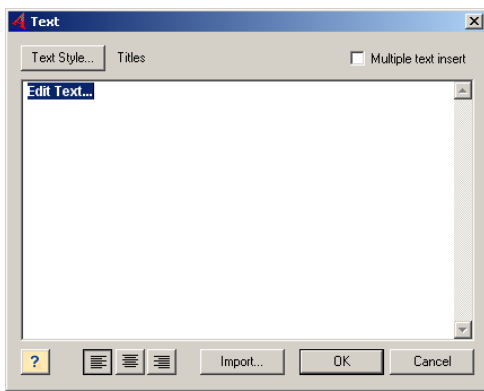
This chapter describes all text and dimension tools.

Adding Text to Your Drawing

You can add text of varying size, color and font to your drawings. Text can be moved and rotated after it has been inserted, just like most other elements.

To add text to your drawing:

1. Select **Tools > Text > Add Text**, or click the Add Text button on the Notation toolbar.



2. In the **Text** dialog, type the text you want to add. If you want to import a text (*.txt) file, click **Import**, then select the file to import.
3. To select a style for the text, click the **Text Style** button and select or create a text style in the **Text Styles** dialog.
4. By default, text is left justified. For multi-line text, this means that text lines will line up on the left, and be ragged on the right. If you want to change the justification of the text, click the appropriate button in the bottom left corner of the dialog.




5. If you want to automatically return to the **Text** dialog after you have inserted the current text, enable the **Multiple text insert** check box. This is ideal when you want to insert different pieces of text in your drawing without having to select the **Add Text** tool again.

6. Click **OK**. The text is attached to your cursor.
7. Position the text where you want it, then click to insert it.

Moving Text

You can move text by simply clicking and dragging it.

To move text:

1. Select the text you want to move.
2. Position your pointer over the blue grab handle to display the Move cursor. 
3. Click and drag to move the text, then release your mouse button.

Rotating Text

You can change the angle of text using the Rotate tool.

To rotate text:

1. Select the text you want to rotate.
2. Right-click and select **Rotate**, or select **Edit > Modify Elements > Rotate**.
3. Hover your pointer over the point you want to rotate around — typically the blue grab handle.
4. Move your mouse to rotate the text in the desired direction.
5. When the text is at the desired rotation, click to set the position.

Editing Text Content

You can edit the content of a text element by accessing its properties.

To edit text:

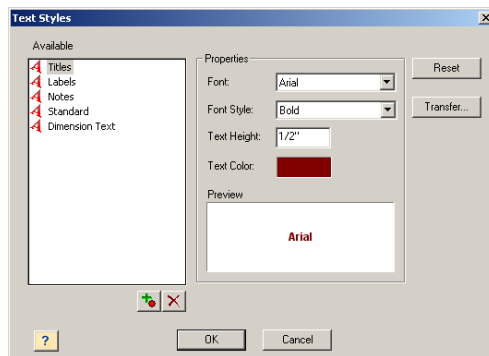
1. Select the text you want to edit.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Text** dialog, edit the text in the text window.
4. Click **OK**.

Changing the Style of Text

Text style settings include font, font style, size, and color. You can select a different text style for selected text, or edit individual text style properties.

To change the style of text:

1. Select the text whose style you want to change.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Text** dialog, click **Text Style**.



4. In the **Text Styles** dialog, select a new text style, or edit the individual properties of the current text style.

You can also create a new text style by clicking the Add Item button.



Font. A set of text characters in a specific style and size.

Font Style. The style of text. Choices can include Regular, Italic, Bold, and Bold Italic.

Text Height. The size of text.

Text Color. The color of text. Click the swatch to access the **Color** dialog and select a color.

5. Click **OK** in the **Text Styles** dialog.
6. Click **OK** in the **Text** dialog. The text is changed automatically.

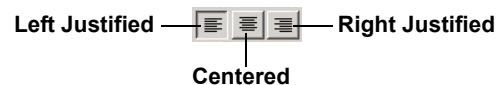
Note: Text styles that are edited or added through inserted text are saved with the current project only. If you want to save them in the text styles library file, so that they can be made available in other projects, see *Saving Customized Text Styles to the Text Styles Library File* on page 251.

Changing the Justification of Multi-line Text

You can change the way multiple lines of text are aligned.

To change the justification of text:

1. Select the text you want to edit.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Text** dialog, click the appropriate justification button below the editing window.



4. Click **OK**.

Deleting Text

You can delete selected text from your drawing in a couple of easy steps.

To delete text:

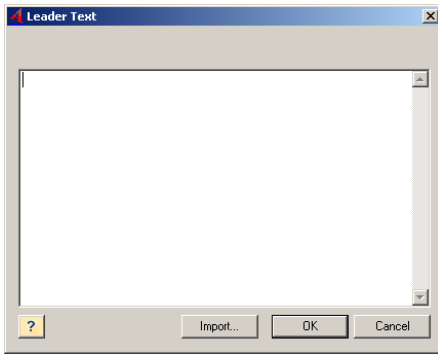
1. Select the text you want to remove. You can select multiple entries using Shift+click.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Adding Text with a Leader

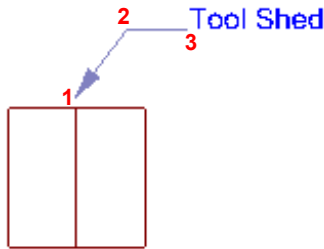
You can insert text with an arrow attached to it that points to a particular element or area in your drawing. The leader has two segments and can be oriented in any fashion.

To add a text with leader:

1. Select **Tools > Text > Add Text with Leader**, or click the Add Text with Leader button on the Notation toolbar.



2. In the **Leader Text** dialog, type the text you want to appear with the leader, then click **OK**.
3. In the drawing area, select the point where you want the arrowhead to appear.
4. Move your pointer to stretch the leader, then select the middle point of the leader.
5. Select a third point for the leader. The text is inserted.



Moving and Stretching a Leader

You can move or stretch a leader by clicking and dragging its grab handles.

To move/stretch a leader:

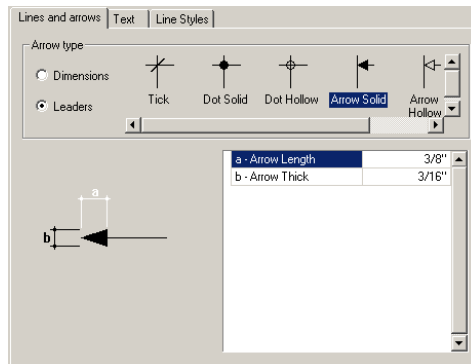
1. Click on the text with leader to select it. Grab handles appear on the leader.
2. Click and drag a grab handle to move the handle, then release your mouse button.

Changing the Leader Arrow Style

The leader arrow style is determined by the current dimension style, which by default is the Standard dimension style. You can change the style of the leader arrow by editing the properties of the dimension style, or by selecting a dimension style with the desired arrow style setting.

To change the style of a leader arrow:

1. Click on the text with leader to select it.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Dimension Styles** dialog, click the **Edit** button. (Alternatively, if you have imported a dimension style with the desired arrow style setting, just select it in the dimension style list.)
4. In the **Edit Dimension Styles** dialog, enable the **Leaders** radio button on the *Lines and arrows* page.



5. Select the desired arrow style in the *Arrow type* area. You can change the dimensions of the arrow in the parameters window.
6. Click **OK** in the **Edit Dimension Styles** dialog.
7. Click **OK** in the **Dimension Styles** dialog.

Moving Leader Text

If you have inserted text with a leader, you can move the text independently of the leader.

To move leader text:

1. Click on the text with leader to select it.
2. Right-click and select **Move Text**, or select **Edit > Modify Elements > Move Text**.
3. Click and drag the text to move it, then release your mouse button.

Editing Leader Text

If you have inserted text with a leader, you can change the text to whatever you want.

To edit leader text:

1. Click on the text with leader to select it.
2. Right-click and select **Edit Text**, or select **Edit > Modify Elements > Edit Text**.
3. In the **Leader Text** dialog, edit the text as desired, then click **OK**.

Deleting Text with a Leader

You can delete text with a leader in a couple of easy steps.

To delete a leader with text:

1. Click on any part of the leader or text. The entire leader with text is selected.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

Dimensioning

3D Home Architect® Landscape Design automatically displays on-screen dimensions as you create line-drawn and area-drawn elements. These dimensions are drawing aids only that disappear once you have inserted the element.

Using *3D Home Architect® Landscape Design's* Dimension tools, you can add fixed dimensions to your drawing to convey the precise measurements of elements in your landscape plan. You can control the style of these

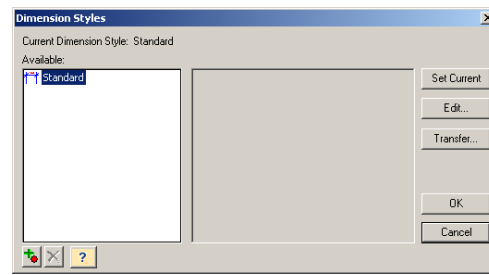
dimensions, and move and stretch them if you need to.

Setting the Current Dimension Style

When you add dimensions to your drawing, they use the current dimension style, which by default is the Standard dimension style. To view the properties of the current style, or select a different style to use, you need to access the Dimension Styles library for the current drawing.

To set the current dimension style:

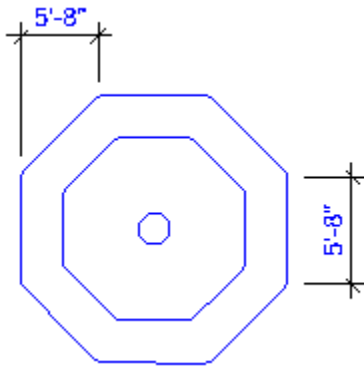
1. Select **Settings > Dimension Styles**.



2. Select the style you want to use. To view or edit the properties of the style, click **Edit**. See *Dimension Style Properties* on page 166 for more information.
3. Click **Set Current** to set the selected style as current.
4. Click **OK**.


Creating Linear Dimensions

A linear dimension is a horizontal or vertical dimension with extension lines going vertically (for a horizontal linear dimension) or horizontally (for a vertical linear dimension) to the origins of the extension lines, which define the endpoint of the dimension.



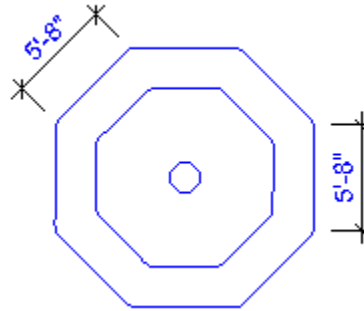
This tool is ideal for creating interior dimensions, or dimensions on a landscape plan.

To create linear dimensions:


1. Select **Tools > Dimensions > Linear Dimensions**, or click the Linear Dimensions button on the Notation toolbar. 
2. Click a point in your drawing to begin the dimension line.
3. Move your mouse (you do not have to hold the mouse button down) to a second point and click. A dimension line including offsets, arrows and a numerical value is added to your drawing.
4. Move your mouse away from the dimension line to stretch your extension lines. When the extension lines are the desired length, click to finish the dimension.

Creating Aligned Dimensions

An aligned dimension is similar to a linear dimension, except it tilts to the same angle as the element you are dimensioning, making it the ideal choice for elements that are not horizontal or vertical.



To create aligned dimensions:

1. Select **Tools > Dimensions > Aligned Dimensions**, or click the Aligned Dimensions button on the Notation toolbar. 
2. Click a point in your drawing to begin the dimension line.
3. Move your mouse (you do not have to hold the mouse button down) to a second point and click. A dimension line including offsets, arrows and a numerical value is added to your drawing.
4. Move your mouse away from the dimension line to stretch your extension lines. When the extension lines are the desired length, click to finish the dimension.

Moving a Dimension Line

You can move a dimension line using the Move Dimension Line tool. When you move a dimension line, the extension lines stretch to accommodate the move.

To move a dimension line using the Move Dimension Line tool:

1. Select the dimension.

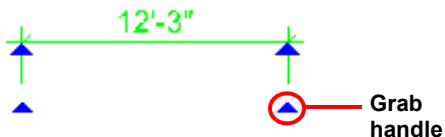
2. Right-click and select **Move Dimension Line**, or select **Edit > Modify Elements > Move Dimension Line**.
3. Click any point to serve as the base point for the move.
4. Move your mouse in the direction you want to move the dimension line.
5. Click to finish the move.

Stretching Dimensions

You can make a dimension longer or shorter, or stretch either of its extension lines. When you stretch the length of a dimension, the dimension value updates automatically to reflect the new length.

To adjust the length of a dimension:

1. Select the dimension.
2. Click on one of the lower extension grab handles, then drag the dimension to stretch it. Note that it is possible to stretch the extension line at the same time.



3. Release your mouse button.

To adjust the length of extension lines:

1. Select the dimension.
2. Click the grab handle at the end of the extension line, then drag to stretch the extension line.
3. Release your mouse button.

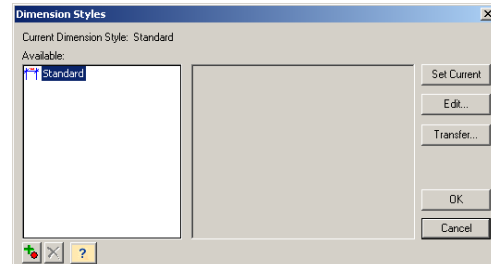
Changing the Style of a Dimension

You can change a dimension's line, arrow and text style by applying a different dimension style to it, or by editing dimension style properties.

To change the style of a dimension:

1. Select the dimension. You can select multiple dimensions using Shift+click.

2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.



3. In the **Dimension Styles** dialog, select the style you want to apply to the dimension.

To create a new dimension style, click the Add Item button, then type a name for the style and press ENTER.



To edit the properties of the currently selected dimension style, click **Edit**, then make your changes in the **Edit Dimension Styles** dialog. See *Dimension Style Properties* on page 166.

4. With the desired style selected, click **Set Current**.
5. Click **OK**.

Note: Dimension styles that are edited or added through inserted dimensions are saved with the current project only. If you want to save them in the dimension styles library, so they can be made available in other projects, see *Saving Customized Dimension Styles to the Dimension Styles Library File* on page 255.

Deleting a Dimension

You can delete a dimension in a couple of easy steps.

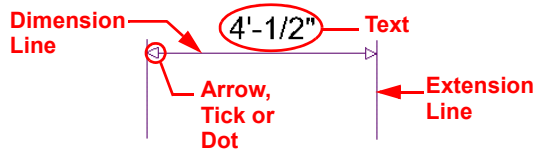
To delete a dimension:

1. Select the dimension.
2. Press the **Delete** key on your keyboard, or right-click and select **Delete**, or select **Edit > Modify Elements > Delete**.

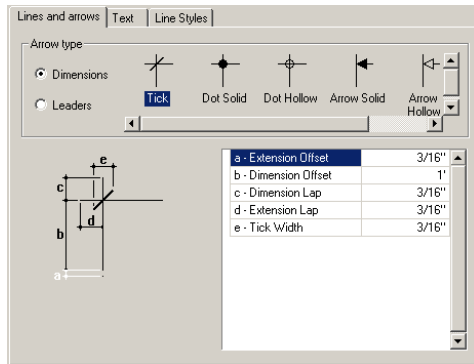
Dimension Style Properties

You can control a dimension's line, arrow and text style properties.

Anatomy of a Dimension



Lines and Arrows

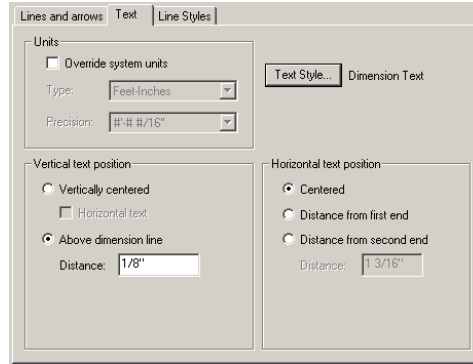


Arrow Type

You can specify an arrow type for dimensions and leaders (leaders are used with the Text with Leader tool). Choose an arrow, dot or tick for your arrow type.

The properties below the *Arrow Type* selection window (Extension Offset, Dimension Offset, etc.) vary depending on the arrow type selected. As you make different selections, the dimension updates in the preview window.

Dimension Text



Units

The units (e.g. feet and inches) and precision used to display the dimension value.

Override system units: Uses the unit of measure specified in the **Edit Dimension Styles** dialog instead of the unit of measure specified in the program settings.

Type: Choose from Feet-Inches, Millimeters, Centimeters, Meters or Inches.

Precision: For Feet-Inches, the choices are whole units (0, 1/2, 1/4 and so on). For metric units, the choices are number of decimal places you can use.

Text Style

Refers to the font, font style, text height and color of the dimension text. Click **Text Style** to select a style.

Vertical Text Position

This is the vertical position of the dimension text relative to the dimension line.

Vertically Centered: Text is placed inside the dimension line.

Horizontal Text: Forces the dimension text to always be horizontal, regardless of the dimension line's angle.

Above Dimension Line: Text is placed above the dimension line.

Distance: Distance between the text and the dimension line when placing text above the dimension line.

Horizontal Text Position

This is the position of the dimension text relative to the ends of the dimension line.

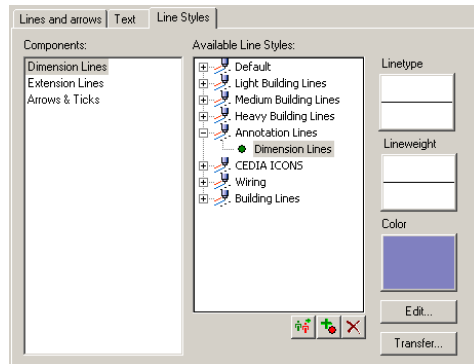
Centered: Centers the text inside the dimension line.

Distance from first end: Places the text a specific distance from the first end of the dimension. Specify the distance in the Distance edit box.

Distance from the second end: Places the text a specific distance from the second end of the dimension. Specify the distance in the Distance edit box.

Line Styles

You can select a different line style for the dimension line, extension lines and arrows. A line style determines the line type and color.



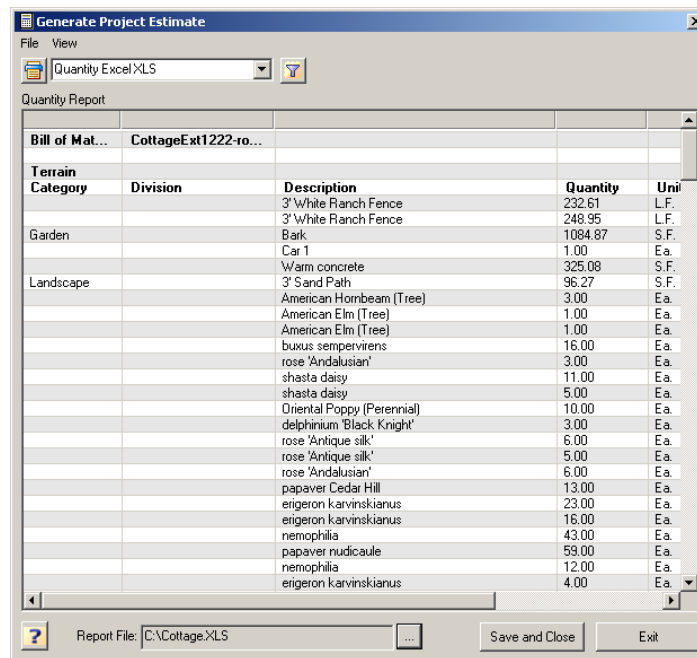
To assign a different line style to a dimension component, select the component in the left pane, then select the desired line style in the right pane.

For information about creating custom line styles, see the Linestyles chapter on page 243.

Project Estimate

3D Home Architect® Landscape Design keeps track of all the materials you use to create your landscape plan as you design it. You can generate a project estimate with a single mouse click. The resulting estimate is displayed in a detailed spreadsheet that can be saved and printed.

Sample unit prices are provided for your convenience, but you can specify custom pricing directly from your suppliers. The grand total is calculated for you automatically, making estimating a breeze!



The screenshot shows a window titled "Generate Project Estimate" with a menu bar (File, View) and a file type dropdown set to "Quantity Excel XLS". Below the menu is a "Quantity Report" section containing a spreadsheet. The spreadsheet has columns for "Bill of Mat...", "Division", "Description", "Quantity", and "Unit". The data is organized into categories: Terrain, Garden, and Landscape. The "Landscape" category lists various plants and materials with their respective quantities and units.

Bill of Mat...	Division	Description	Quantity	Unit
		3' White Ranch Fence	232.61	L.F.
		3' White Ranch Fence	248.95	L.F.
Garden		Bark	1084.87	S.F.
		Car 1	1.00	Ea.
		Warm concrete	325.08	S.F.
Landscape		3' Sand Path	96.27	S.F.
		American Hornbeam (Tree)	3.00	Ea.
		American Elm (Tree)	1.00	Ea.
		American Elm (Tree)	1.00	Ea.
		buxus sempervirens	16.00	Ea.
		rose 'Andalusian'	3.00	Ea.
		shasta daisy	11.00	Ea.
		shasta daisy	5.00	Ea.
		Oriental Poppy (Perennial)	10.00	Ea.
		delphinium 'Black Knight'	3.00	Ea.
		rose 'Antique silk'	6.00	Ea.
		rose 'Antique silk'	5.00	Ea.
		rose 'Andalusian'	6.00	Ea.
		papaver Cedar Hill	13.00	Ea.
		erigeron karvinskianus	23.00	Ea.
		erigeron karvinskianus	16.00	Ea.
		nemophila	43.00	Ea.
		papaver nudicaule	59.00	Ea.
		nemophila	12.00	Ea.
		erigeron karvinskianus	4.00	Ea.

At the bottom of the window, there is a "Report File:" field containing "C:\Cottage.XLS", a "Save and Close" button, and an "Exit" button.

Generating a Project Estimate

You can view an accurate project estimate at any time during a design session. The estimate includes a list of materials, the quantities used, and pricing. The estimate is always up-to-date and reflects your project in its current state.

To generate a project estimate:

1. Select **Tools > Calculate/Estimate > Generate Project Estimate**.

Category	Division	Description	Quantity	Unit
Terrain				
		3' White Fench Fence	232.51	L.F.
		3' White Fench Fence	248.95	L.F.
Garden		Bark	1084.87	S.F.
		Cap 1	1.00	Ea.
		Warm concrete	325.08	S.F.
Landscape		3' Sand Path	96.27	S.F.
		American Hornbeam (Tree)	3.00	Ea.
		American Elm (Tree)	1.00	Ea.
		American Elm (Tree)	1.00	Ea.
		buxus sempervirens	16.00	Ea.
		rose 'Andalusian'	3.00	Ea.
		shasta daisy	11.00	Ea.
		shasta daisy	5.00	Ea.
		Oriental Poppy (Perennial)	10.00	Ea.
		delphinium 'Black Knight'	3.00	Ea.
		rose 'Antique silk'	6.00	Ea.
		rose 'Antique silk'	5.00	Ea.
		rose 'Andalusian'	6.00	Ea.
		papaver 'Cedar Hill'	13.00	Ea.
		eigeteron karvinskianus	23.00	Ea.
		eigeteron karvinskianus	16.00	Ea.
		menophila	43.00	Ea.
		papaver nudicaule	58.00	Ea.
		menophila	12.00	Ea.
		eigeteron karvinskianus	4.00	Ea.

By default, the estimate is shown in *Microsoft® Excel XLS* spreadsheet format. You can switch it to a standard column report format, which can be saved as a TXT file. If you want you can remove the grid lines from the display.

If you have opened a project from another *3D Home Design* program which contains a house, you can choose to omit all or selected locations from the estimate if you want.

The estimate can be printed and saved.

To switch to a standard column report format:

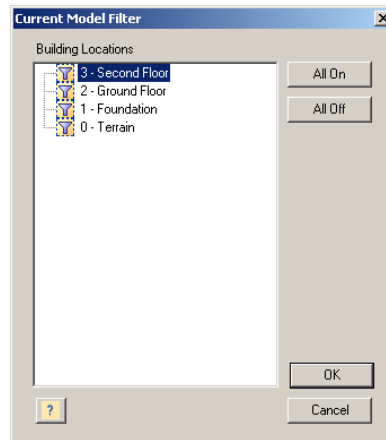
1. In the **Generate Project Estimate** dialog, select **Standard Report Form** from the report form drop box.

To turn grid lines off:

1. In the **Generate Project Estimate** dialog, select **View > Show Grid**.

To filter locations from the estimate:

1. In the **Generate Project Estimate** dialog, click the **Filter Report** button beside the report form drop box.



2. To omit a location and its elements from the project estimate, click the location's filter icon. You can omit landscaping elements from the report by filtering the terrain out.
3. Click **OK**. The estimate is updated.

To print the estimate:

1. In the **Generate Project Estimate** dialog, select **File > Print**, or click the **Print** button to the left of the report form drop box.
2. In the **Print** dialog, select the printer you want to use, then click **Print**.




To save the estimate:

1. In the **Generate Project Estimate** dialog, select **File > Save and Close**, or click the **Save and Close** button at the bottom of the dialog.

Note: By default, the estimate is saved in the same directory where the project is saved.

To save using a different file name or save location:

1. Click the Browse button next to the **Report File** edit box at the bottom of the **Generate Project Estimate** dialog. 
2. In the **Report Filename** dialog, select the location where you want to save the estimate.
3. In the **File name** edit box, type the name you want to save under.
4. Click **Save**. The estimate is saved under the specified name and location.

To open the estimate in the associated editor:

1. Select **File > Open with Associated Editor**. If you haven't saved the estimate yet, it is saved for you. The estimate is then opened in the associated editor. For estimates in the XLS format, the estimate opens in *Microsoft® Excel*. For estimates in the Standard Report (TXT) format, the estimate opens in a text editor such as *Notepad*.

To close the Generate Project Estimate dialog:

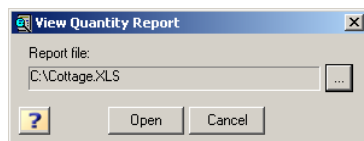
1. Select **File > Exit**, or click the Close button in the top right corner of the dialog.


Opening a Saved Estimate

Once you have saved an estimate, you can open it any time in its associated editor (*Microsoft® Excel* or *Notepad*). You can then edit and print the estimate if you want.

To open a saved estimate:

1. Select **Tools > Calculate/Estimate > View Project Estimate**.



2. Click the Browse button, then locate the file to open. 
3. Click **Open**. XLS files open in *Microsoft® Excel*, and TXT files open in a text editor such as *Notepad*.

Editing Material Pricing

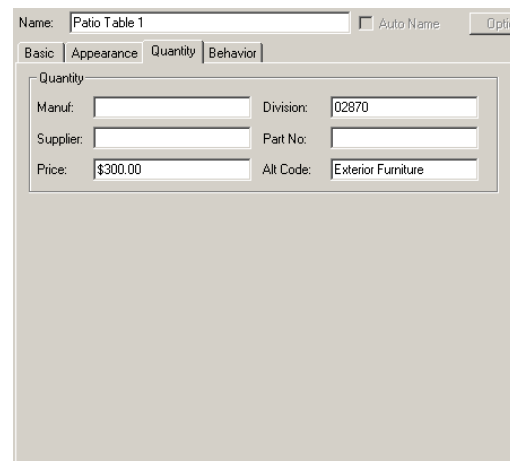
Most elements have a default unit price set for them in their properties. These prices are used in the project estimate.

If you have already created your design, you can edit the prices of inserted elements by selecting them in the drawing, then editing their properties. Alternatively you can generate and save a project estimate, then edit the pricing in *Microsoft® Excel* or *Notepad*, depending on the report format you choose.

If you edit the price of any element in the catalog, the price change will affect all new insertions of the element.

To edit the price of an inserted element:

1. Select the element in your drawing. You can select multiple elements of the same type using Shift+click.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the properties dialog, select the Quantity tab.



4. Edit the value in the **Price** edit box. Note that prices are unit prices. For a carpet, for example, you would enter the price per square foot, not the price of the entire carpet.
5. Click **OK** in the properties dialog.

To edit material pricing in the catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click and element in the catalog and select **Catalog Manager**.
2. From the **Element** drop box, select the element type you want to edit.
3. In the *Select a Type* window, select the group containing the element you want to edit.
4. In the *Select an Element* window, select the element to edit.
5. Select **Catalog > Element Properties**, or right-click and select **Properties**.
6. In the properties dialog, select the Quantity tab.
7. Edit the value in the **Price** edit box. Note that prices are unit prices. For a carpet, for example, you would enter the price per square foot, not the price of the entire carpet.
8. Click **OK** in the properties dialog.
9. Click **OK**.

Chapter 28

3DTrueView™

3D Home Architect® Landscape Design incorporates powerful 3DTrueView™ rendering technology. 3DTrueView™ rendering adds light and shadow to a textured 3D view to achieve stunning, photo-realistic images of your design. These images can be printed directly from the screen. You can also choose to save the rendered image to a bitmap (BMP) or JPG file that you can then open in most graphic editing applications.

Creating a 3DTrueView™ rendering involves nothing more than a single mouse click. Just sit back and watch your design come to life!

How 3DTrueView™ Rendering Works

A rendered view is a photo realistic view that includes light and shadows. When you render a 3D scene, the program performs a series of lighting calculations to determine the lighting in a scene. These are also called *radiosity* calculations. Once a final result is met, the scene is *ray traced*, or rendered. Ray tracing works by tracing the path taken by a ray of light through the scene, and calculating the ray's reflection, refraction, or absorption whenever it intersects an element in the scene.

Material properties define how light reflects off a surface. Direct light and ambient light levels define the light that is reflected. Direct light is light that is emitted from light fixtures. It has a specific color, intensity and direction. Ambient light can be thought of as a general level of light that is everywhere in the scene. Every light in a scene contributes to the overall ambient light in a scene.

The first part of the radiosity process involves finding those element surfaces that are visible to direct light and calculating how much light is transferred to each element. Some elements will receive more light than others depending on their surface properties, and different surfaces will reflect different amounts of light. Still, each element will absorb some of the light, so the total amount reflected back into the scene will be less than that emitted by the light fixtures.

The next part of the process involves finding the element that reflects the most light, and repeating the process. The element is considered a secondary light source, so we need to calculate how much of its light is transferred to other elements in the scene. The process is repeated, one step at a time, until the amount of light remaining in the scene is negligible in comparison to the light originally emitted by the light fixtures. We then say that the radiosity calculations have converged to a solution, and that's when ray tracing begins.

Setting the Viewpoint for the Scene

When you create a 3DTrueView™ rendering, your model is captured at the angle currently shown on the screen. In most cases, the best type of view for 3DTrueView™ rendering is a Perspective view, because it is the most realistic. For information about 3D viewing, see *2D and 3D Viewing* on page 19. Specific topics you might want to look at:

- *Viewing in 3D* on page 21
- *Changing Your Viewpoint* on page 210
- *Selecting a Preset Camera Angle* on page 212
- *Changing the Viewing Field Angle* on page 213

Setting the Scene

Even though creating a 3DTrueView™ rendering involves nothing more than a mouse click, there are a few things you should consider beforehand.

Note: It doesn't matter what display mode (wireframe, patterned, etc.) you're currently in. 3DTrueView™ renderings will always be textured.

Daytime Shots

If you want to do a daytime shot, the most important factor to consider is sunlight. This is determined by your global position and time of day. By adjusting these settings, you control how much sunlight is in the scene, and from what angle it shines. See *Defining Your Location and Time of Day* on page 175.


Night Shots

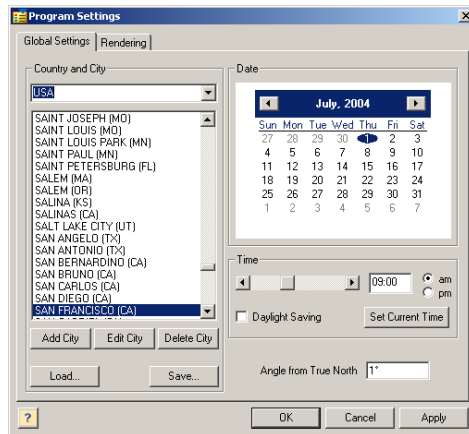
To create a night shot, you need to first set your background to a night scene. See *Selecting a Background for 3D Views* on page 215. Once your background is set, all you need to do is set the time to a time of day when there is no sun. If you do want to create a night shot, you will probably want to insert some exterior lighting in your design. See *Inserting Landscape Lighting* on page 96.

Defining Your Location and Time of Day

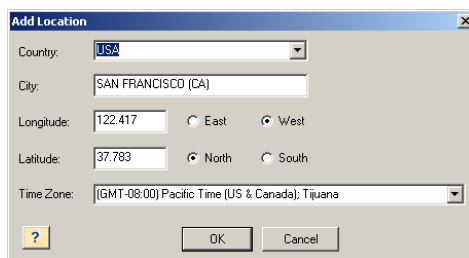
You can define where your model is located in the world, as well as set the time of day. This determines how much daylight there will be in the scene.

To define your location and time of day:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the 3DTrueView Options button on the 3DTrueView toolbar. 
2. In the **Program Settings** dialog, select the **Global Settings** tab.



3. Select a country and city from the appropriate drop boxes. You can add or edit a city if needed. Just click the **Add City** or **Edit City** button. You will need to know the longitude, latitude and time zone of the city. You can save new or edited cities to the city template for use in other projects if you want.



4. To set the month and day, select a month by clicking the arrows on the month bar at the top of the calendar, then click a number on the calendar.
5. To set the time of day, enter a time in the **Time** edit box, or use the slider to select a time. Enable either the **am** or **pm** radio button. Clicking **Set Current Time** reads the current time set in your computer system and defaults to the next smallest 5-minute increment of time. For example, 12:04 becomes 12:00.
6. To keep track of changes in time due to daylight savings, enable the **Daylight Saving** check box.
7. To set the angle from True North, enter a value in the **Angle from True North** edit box. This is the “geographic” North, as opposed to the “magnetic” North which you see on a compass. The value you specify determines where North is on your screen, and affects the angle of the sun for daylight rendering. The number in degrees that you enter is in relation to the 90° perpendicular orientation of your drawing. A value of 1° makes the top of the screen North. A value of 90° makes the top of the screen East, and the left side of the screen North.

For more information, see “Specifying the Angle of True North” in the Online Help (enter the keywords “true north”).

It is assumed that information regarding building orientation to True North can be taken from, or calculated from, a surveyor's certificate. However, True North can be calculated from a Magnetic North reading taken at your building site. For more information, see “Calculating True North from Magnetic North” in the Online Help (enter the keywords “true north”).

8. Click **OK**.

To save new or edited cities:

1. On the Global Settings page of the **Program Settings** dialog, click the **Save** button below the city list.

2. In the **Save As** dialog, select the *timezone.cty* file in the program's templates folder.
3. Click **Save**.
4. Click **Yes** to replace the original city template.

To load a saved city template into other projects:

1. On the Global Settings page of the **Program Settings** dialog, click the **Load** button below the city list.
2. In the **Open** dialog, select the *timezone.cty* file in the program's Templates folder.
3. Click **Open**. The city list is updated automatically.

Creating a 3DTrueView™ Rendering

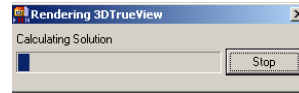
Creating a photo realistic 3DTrueView™ rendering involves only a simple menu selection or mouse click. Rendered views are displayed instantly on the screen once they've been calculated. If you enable the Render to File option in your render options, the image will also be saved to a BMP or JPG file for later access. For more information see *Saving a 3DTrueView™ Rendering to a File* on page 179.

To create a 3DTrueView rendering:

1. Make sure you have set the 3D scene exactly how you want it.
2. Select **View > 3DTrueView > Render 3DTrueView**, or click the Render 3DTrueView button on the 3DTrueView toolbar. The solution begins. Before the rendered view is generated, the program goes through a process of calculating light in the scene. These are called *radiosity* calculations. Basically, it determines how much light is given off by the sun or by lighting fixtures, and how much light is reflected off the surface of elements. The view is updated at regular intervals during these calculations. A dialog appears on the



screen that shows you the progression of the radiosity calculations.

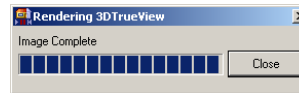


If you click **Stop** during the solution stage, radiosity calculations will stop, and the scene will be instantly rendered. This may be fine if the process seems to be taking a long time, but you may not get the result you want.

3. Once the radiosity calculations are complete, rendering begins. Please wait while the image is generated.



Once the rendering is complete, it fills your current view window. The **Rendering 3DTrueView** dialog tells you that the image is complete.



At this point you can print the view if you want.

4. When you are finished viewing the 3DTrueView™ rendering, click **Close** in the **Rendering 3DTrueView** dialog. The view returns to its original, pre-rendered state.

If you selected the **Render to File** option before rendering, the image is saved in the same directory your project is located in. For more information, see *Saving a 3DTrueView™ Rendering to a File* on page 179.

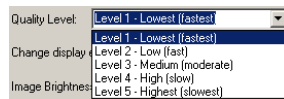
Adjusting the Rendering Quality

By default, the quality level chosen for 3DTrueView™ renderings is Level 1 - Lowest (fastest). You can select an increased quality level

before rendering if you want. Note that the higher level of quality you choose, the longer the rendering process takes.

To adjust the rendering quality:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the 3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. Select the quality level you want from the **Quality Level** drop box.



4. Click **OK**.

Changing the Refresh Rate During Lighting Calculations

As the program performs lighting calculations, the view updates at regular intervals to reflect calculations up to that point. You can change the interval at which the view refreshes by increasing or decreasing the number of steps between visual updates.

To change the refresh rate during radiosity calculations:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the 3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. Edit the value in the **Change Display Every _ Steps** edit box. Fewer steps increase the frequency of visual updates, but can increase rendering time.
4. Click **OK**.



Adjusting the Brightness of the Rendered Image

The program's "virtual camera" works in a manner similar to actual point-and-shoot cameras. It automatically calculates the correct "exposure" for the lighting situation and produces a view with infinite depth of field (i.e. everything is in focus). However if, in exceptional circumstances, you want to brighten or darken a rendering, you can use the Image Brightness option to manually override the automatic exposure. Brightness can be increased or decreased.

To adjust image brightness:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the 3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. Specify the amount you want to increase or decrease the brightness in the **Image Brightness** edit box, or use the arrow buttons to scroll up or down. A positive value increases the brightness, while a negative value decreases it.
4. Click **OK**.




Turning Daylight Off

By default, daylight is always included in radiosity calculations, even for night scenes. If you are doing a rendering inside a model that was created in another *3D Home Design* program, you can turn daylight off if you want. This basically omits daylight from the lighting calculations, and can speed up rendering. You may want to do this in a room with very small windows, for example.

Note: The Enable Daylight option should always remain on for exterior shots, even if it is a night shot. If you want to create a night shot, change your time of day instead. See *Defining Your Location and Time of Day* on page 175.

To turn daylight off:


1. Select **View > 3DTrueView > 3DTrueView Options**, or click the  3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. Uncheck the **Enable Daylight** check box.
4. Click **OK**.

2. In the **Program Settings** dialog, select the Rendering tab.
3. In the *Effects* area, check the **Enable** check box.
4. Enable the **Fog** radio button.
5. In the **Density** edit box, specify the desired thickness of the fog. The higher the percentage, the thicker the fog.
6. Click **OK**.

Using Antialiasing to Reduce Jagged Edges

Antialiasing blends pixels in areas where two colors or two materials meet to reduce artifacts (or “stair steps”) and produce a more natural look to the scene. By default, antialiasing is disabled to increase rendering speed. You can select varying levels of antialiasing.


To use antialiasing:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the  3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. Use the up arrows key next to the **Antialiasing** check box to increase the level of antialiasing. The higher the level, the cleaner the image, but the longer the rendering process takes. The highest level is 4.
4. Click **OK**.

Creating a Smoke Effect

To create a smoke effect in your rendering, you need to turn on the Smoke option in your rendering settings before rendering the view.

To create a smoke effect:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the  3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. In the *Effects* area, check the **Enable** check box.
4. Enable the **Smoke** radio button.
5. In the **Density** edit box, specify the desired thickness of the smoke. The higher the percentage, the thicker the smoke.
6. Click **OK**.

Adjusting the Light Coming from Light Fixtures

To adjust the color or intensity of light coming from a light fixture, you can add light bulbs, change a light bulb to a different type, adjust the intensity of the light, select a different color for the light, or turn a light off completely.

See the following topics:


Editing a Light Fixture’s Light Source on page 96

Turning a Light On or Off on page 97

Creating a Fog Effect

To create a fog effect in your rendering, you need to turn on the Fog option in your rendering settings before rendering the view.

To create a fog effect:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the  3DTrueView Options button on the 3DTrueView toolbar.

Editing the Surface Properties of Materials

Different materials have different finishes. Surface finishes include Dull, Low Gloss, Semi Gloss, High Gloss, Liquid, Fully Reflective, Partially Reflective, Shiny, Fully Transparent, Partially Transparent, and Varnished. The finish determines how much a material reflects, emits and absorbs light. These factors can affect the lighting in a rendered scene.

To edit the surface properties of an element's materials:

1. Select the element in your drawing.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the properties dialog, select the Appearance tab.
4. On the Appearance page, click the **Select** button, or click the Texture switch to access the **Materials** dialog.
5. In the **Materials** dialog, click the Rendered switch to bring up the **Edit Materials** dialog.
6. To change the surface finish of the material (dull, shiny, etc.), make a selection from the drop box in the *Surface Properties* area. If you want to specify a custom surface finish, select *Custom* in the list, then click the **Advanced** button.
7. If creating a custom finish, specify its properties. These are described below.

Specular. Reflection that creates highlights on materials, making them appear shiny.

Emissive. The amount of light given off by a material. The more emissive a material is, the more self-luminous it appears.

Transparency. The degree to which a material is pervious to light.


Color Bleed. The degree to which different colors blend where they meet.
8. Click **OK** in the **Edit Materials** dialog.
9. Click **OK** in the **Materials** dialog.

10. Click **OK** in the properties dialog.


Saving a 3DTrueView™ Rendering to a File

Rendered views are displayed instantly on the screen once they've been calculated. If you want the image to be saved to a file, you need to turn on the Render to File option in your render settings before creating the rendering. The image will be saved to a BMP or JPG file that you can open in most graphic editing applications.

To save a 3DTrueView rendering to a file:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the 3DTrueView Options button on the 3DTrueView toolbar. 
2. In the **Program Settings** dialog, select the Rendering tab.
3. In the *Image Output* area, enable the **Render to File** check box.
4. By default, rendered images are saved in the same directory your projects are stored in. By default, this would be a directory similar to the following:


```
C:\Documents and Settings\<Current User>\My Documents\Landscape Design Deluxe 6\Projects
```


To select a different location to save your rendered image in, click the Browse button next to the current output folder path. In the **Open** dialog, navigate to the folder where you want to store rendered images. 

By default, the file has the same name as your project for easy identification. To specify a custom name, enter the name in the **File Name** edit box. You can select either BMP or JPG as your file format from the **Files of type** drop box.
5. Click **OK**.

Specifying the Output Size of Rendered Images

By default, 3DTrueView™ images fill the view window they are created from. If you enabled the Render to File option in your rendering settings, the image is also saved at that size. You can select another output size if you want.

To specify an output size for rendered images:



1. Select **View > 3DTrueView > 3DTrueView Options**, or click the  3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. In the *Image Output* area, select the desired size from the **Size** drop box. The default selection is *Current View Size*, which saves the image at the size currently shown on the screen. Pre-defined sizes include 640 x 480, 800 x 600, and 1024 x 768. Selecting the *Custom* option lets you define a custom size by entering values in the **Width** and **Height** edit boxes.
4. Click **OK**.

Creating Multiple 3DTrueView™ Renderings in the Same Project

If you enable the Render to File option before creating a rendering, the image is saved to a BMP or JPG file in your projects directory. The file has the same name as your project. If you create another 3DTrueView™ rendering in the same project, the file from the previous rendering is overwritten.

If you want to create and save more 3DTrueView™ renderings within the same project, you need to specify a different output name for each new image before creating the rendering.

To create and save an additional 3DTrueView rendering:

1. Select **View > 3DTrueView > 3DTrueView Options**, or click the  3DTrueView Options button on the 3DTrueView toolbar.
2. In the **Program Settings** dialog, select the Rendering tab.
3. In the *Image Output* area, make sure **Render to File** is checked.
4. Click the Browse button next to the current output folder path. 
5. In the **Open** dialog, enter a name in the **File name** edit box that is different from any other images that you have saved. You can select either BMP or JPG as your file format from the **Files of type** drop box.
6. Click **Open**.
7. Click **OK** in the **Program Settings** dialog.

The next 3DTrueView™ rendering you create will be saved to the new file name.

Part 8

Managing Files

Opening, Saving & Printing

page 183

Exporting Files

page 189

Chapter 29

Opening, Saving & Printing

Once you have started and saved a project, you can work on it whenever you like. You can open a saved project by selecting the Open a Saved Project button in the startup dialog, or by selecting Open on the File menu if the program is already running. Once you have opened a project, you can edit, save, print and export it, as well as save it as a template for future projects.

You can have more than one project open at a time. If you have more than one project open, you can switch between projects using the Window menu.


As you edit your drawing, the changes you make are stored temporarily in your computer's memory until you save them. The Save function saves the current project under its current name. You can use Save As to save a project under a different name, and Save All to save all currently open projects. You can also use the Save As tool to save a drawing as a template for use in future projects.

Opening a Saved Project

You can open a saved project (*.bld file) directly from the startup dialog that appears when you start the program. Just click **Open a Saved Project**, then select the project to open.

If the program is already running, you can open a saved project using the Open tool.

To open a saved project if the program is already running:

1. Select **File > Open**, or click the Open button on the **Standard** toolbar. 
2. In the **Open** dialog, navigate to the location where you saved the project.
3. Select the project to open, then click **Open**.

Note: You can open drawings from version 5.0 or later of *3D Home Design Suite Professional*, *3D Home Architect*[®], or *3D Home Landscape Designer*.

Tip: If the project you want to open is one that your recently worked on, it may be listed in the recently used file list near the bottom of the **File** menu. Just select it to open it.


Viewing Sample Plans

The program ships with a number of sample projects that you can use to see what the program can do, and get design ideas. You can also use a sample project as a template for your own design project.

Sample projects are available for selection in the startup dialog when you launch the program. Just click **View Sample Plans** and select one from the list.

If the program is already running, you can open a sample project using the Open tool.

To open a sample plan if the program is already running:

1. Select **File > Open**, or click the Open button on the **Standard** toolbar. 
2. In the **Open** dialog, navigate to the location where you installed the program, then select the **Samples** directory (e.g. *C:\Program*


Files\3D Home Architect\Landscape Design Deluxe 6\Samples).

3. Select the project to open, then click **Open**.

Changing the Number of Files in the Recently Used File List

By default, a maximum of four projects are listed in the recently used file list near the bottom of the **File** menu. You can increase or decrease this number if you want.

To change the number of files in the recently used file list:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the General tab.
3. Type the maximum number of files to display in the **Recently used file list** edit box, or use the arrows to select a number. You can list a maximum of 9 files.

Repairing Damaged Projects

Occasionally a drawing may become damaged, usually when drawing walls. The Repair Project tool scans the project for elements that have caused damage, and either fixes or removes them.

To repair a damaged project:

1. Select **File > Repair Project**.



If the recovery is successful, the following dialog box appears:



If the recovery is not successful, a dialog appears telling you why it was not successful.

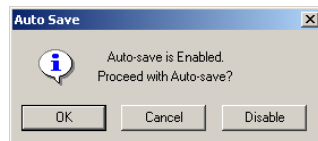
Saving Projects

The program has three save functions: **Save**, **Save As** and **Save All**. They are located on the **File** menu.

- To save the current project under the current name, or to save the current project for the first time, select **File > Save**, or click the Save button on the Standard toolbar. If you are saving for the first time, you are prompted for a file name. 
- To save the current project under a different name (i.e. create a copy of it), select **File > Save As**, then specify a name in the **Save As** dialog.
- To save all currently open projects, select **File > Save All**, or click the **Save All** button on the Standard toolbar. 

Setting the Automatic Save

The Automatic Save option prompts you to save your project at regular intervals. This is a great way to make sure you save your changes regularly and avoid any loss should a power failure or system error occur. By default, the Automatic Save is enabled.



To set the Automatic Save:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the General tab.
3. Enable the **Automatic Save every** check box.
4. In the edit box, specify the save interval in minutes, or use the arrows to select a value.
5. Click **OK**.

Note: When you are prompted to save your project, you can choose not to save at that time by clicking **Cancel** in the prompt dialog. If you want to disable the automatic save prompt, you can click **Disable** in the dialog.

Note: Disabling the Automatic Save applies to the current project only. The Automatic Save is turned on by default for all new projects.


Specifying a Default Save Directory

By default, new (unsaved) projects are saved in a directory similar to the following unless you specify otherwise:

C:\Documents and Settings\\My Documents\Landscape Design Deluxe 6\Projects

You can specify a different default save directory if you want.

To specify the default save directory:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the **General** tab.
3. In the *File Paths* area, click on the **Projects Directory** to select it.
4. Click **Modify**.
5. In the **Browse For Folder** dialog, select the directory you want to use as your default save directory, then click **OK**.
6. Click **OK** in the **Program Settings** dialog.

Saving a Project as a Template

By default, every new project you start is based on a template. A template determines what settings new projects will have, such as the unit of measure, and building location settings. You can even include elements in a template if you want.

You can create a template out of any drawing by simply saving it in your Templates directory. To use the template in new drawings you need to select the template in your Startup options.

To create a template:


1. Unless you have already created the drawing you want to use as a template, start a new project (**File > New**).
2. Specify the settings you want to save with the template. Note that any elements in your drawing will be saved as well, so unless you want these elements to appear in new projects, you should delete the elements from your drawing.
3. Select **File > Save As**.
4. In the **Save As** dialog, navigate to the program's Templates folder (e.g. *C:\Program Files\3D Home Architect\Landscape Design Deluxe 6\Templates*).
5. In the **File name** edit box, type a name for the template.
6. Click **Save**.

Selecting a Default Project Template

By default, new projects are based on a default template that ships with the program. If you chose to work in Imperial units during program installation, new projects will be based on the *1-Blank Project (ft & in).bld* template, which is a blank drawing with measurements set to feet and inches. If you chose to work in Metric, new projects will be based on the template, which has its unit of measure set to millimeters. Each template contains three default building locations: Foundation, Ground Floor and Second Floor.

You can select a different template to use as the default template when starting new drawings. You can use one of the templates that ships with the program, or one that you have created yourself.

To select a default project template:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the General tab.

3. In the *Startup* area, make sure the **Startup using Project Template** radio button is enabled.
4. Click the Browse button next to the current template name. 
5. In the **Open** dialog, select the template you want to use from the Templates directory, then click **Open**.
6. In the **Program Settings** dialog, click **OK**.

Note: You need to start a new drawing to put the new template into effect.

Disabling the Use of Templates

By default, new projects are based on a template that determines the unit of measure used. Templates also have a few pre-defined settings, such as a set of default building locations.

If you prefer you can start new projects without using a template. If you choose to do this, new projects will be blank with no pre-defined settings.


To disable the use of templates:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the General tab.
3. In the *Startup* area, enable the **Do not use Project Template** radio button.
4. Click **OK**.

Setting the Path to the Templates Directory

By default, the Templates directory is located in the 3D Home Architect Landscape Design program group. If you have moved your Templates directory, or have chosen to store your templates in a different directory, you should reset the path to the template directory in your program settings. The path you set determines the default directory shown when you browse for templates in your *Startup* options on the General page of the Program Settings dialog.

To set the path to your templates directory:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the **General** tab.
3. In the *File Paths* area, click on the **Templates Directory** to select it.
4. Click **Modify**.
5. In the **Browse For Folder** dialog, select the directory containing your templates, then click **OK**.
6. Click **OK** in the **Program Settings** dialog.


Selecting a Directory for Temporary Files

Certain functions of the program create temporary files which are stored in a directory on your computer system. By default, the path to the temporary directory is as follows:

C:\Documents and Settings\<<Current User>\Local Settings\Temp

You can specify a different directory to store your temporary files in if you want.

To set a different temporary files directory:


1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the **General** tab.
3. In the *File Paths* area, click on the **Temporary Directory** to select it.
4. Click **Modify**.
5. In the **Browse For Folder** dialog, select the directory you want to use as your default temporary files directory, then click **OK**.
6. Click **OK** in the **Program Settings** dialog.

Closing Projects

Projects remain open until you close them or exit the program. You can close the active project without exiting the program. If you have more

than one drawing open, make sure the drawing you want to close is the active one.

To close a drawing:

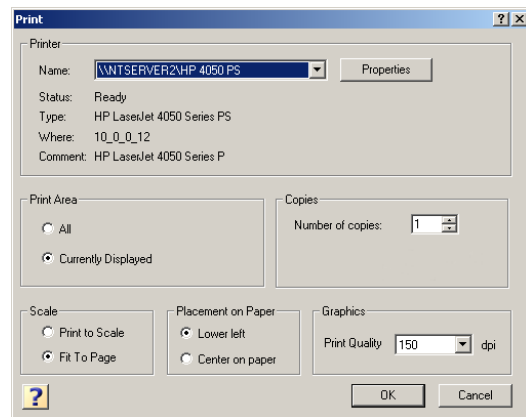
1. Select **File > Close**, or click the Close button on the Standard toolbar. 
2. In the dialog, click **Yes** or **No** when you are asked to save changes.
3. If you haven't named the project yet and you clicked **Yes** in the previous step, specify a name for the project in the **Save As** dialog, then click **Save**.

Printing Drawings

The program uses the standard *Windows Print* routine with a few added features for your printing convenience.

To print a drawing:

1. Select **File > Print**, or click the Print button on the Standard toolbar. 



2. In the **Print** dialog, specify your print settings.

Printer. Select a printer from the drop box. Click **Properties** to specify general printer properties.

Print Area. The **All** option prints the extents of your drawing, which is the portion of your drawing that currently contains elements. As you add new elements, the extents update automatically. The **Currently Displayed**

option prints exactly what you see on the screen in the current view. If only part of your drawing is currently visible, only that part will appear in the printout.

Copies. Select the number of copies to print from the **Number of copies** drop box.

Scale. The **Print to Scale** option prints the current view according to its defined scale in the view properties, regardless of the paper size. The scale is the ratio of drawing units to real-world units. A scale of 1:1 (12" = 1'- 0") creates a view that is the same scale as the view in the main drawing window. A scale of 1:12 (1" = 1'- 0") creates a smaller-scale view. Note that if you change the scale, the model does not scale on the screen. It will only be scaled on paper when you print the drawing.

However, things like text and dimensions will scale on the screen because they are specified in real-world units, whereas the model on your screen is created using units that are only proportional to real-world units. Regardless of a view's scale, things like text and dimensions will always print out at the size that was assigned to them at the time of insertion. For example, if you inserted text that had a 1/2" text height setting, the text will be 1/2" on paper, regardless of the view scale or what the text looks like on the screen.

To see a view's defined scale, select **Edit > View Properties**, or right-click in the drawing area and select **View Properties**, or right-click on a view's tab below the drawing area and select **View Properties**.

Note that the **Print to Scale** option will not work with most 3D views (unless they are elevation views), since 3D views cannot be scaled.

The **Fit To Page** option scales the drawing to fit the selected paper size. Note that this is the default setting for 3D views, since 3D views are not affected by changes in scale (unless they are elevation views).

Placement on Paper. If you select **Lower left**, the image is printed in the lower left corner of the paper. If you select **Center on paper**, the image is centered on the paper.

Graphics. Choose from three levels of print quality (150, 300 or 600 dpi). A higher resolution (600 dpi) produces graphic images that are sharper and show finer detail, while a lower resolution (150 dpi) permits faster printing and shows less detail.

3. Click **OK**.

Using Print Setup

The program uses the standard *Windows Print Setup* for printer and paper selection.

To select a printer and paper for output:

1. Select **File > Print Setup**.
2. Choose the **options** you want.
3. Click **OK**.

Chapter 30

Exporting Files

You can export your drawing to a variety of file formats including DXF, 3DS, WRL, BMP, JPG and TGA.

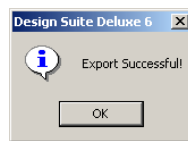
Exporting Your Model

The Export 3D Model tool lets you export your drawing to three file formats:

- AutoCAD Basic DXF (*.dxf)
- Autodesk 3D Studio (*.3ds)
- VRML (*.wrl)

To export your model:

1. Select **File > Export > 3D Model**.
2. In the **Save As** dialog, click on the **Save as type** drop box and select the file format you want to export to.
3. Locate the directory where you want to save the exported file.
4. In the **File name** edit box, type a file name.
5. Click **Save**. A dialog appears confirming the model has been exported successfully.



6. Click **OK**.

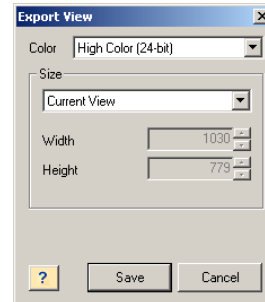
Exporting the Current View

The Export 2D Image tool lets you export the current view to a BMP, JPG or TGA file.

To export a view:

1. Select **File > Export > 2D Image**.
2. In the **Save As** dialog, click on the **Save as type** drop box and select the file format you want to export to.
3. Locate the directory where you want to save the exported file.
4. In the **File name** edit box, type a file name.

5. Click **Save**. The **Export View** dialog appears:



6. From the **Color** drop box, select the desired color setting. Choose from *Grayscale*, *256 Color*, *High Color (16-bit)*, *High Color (24-bit)* or *True Color (32-bit)*.
7. From the **Size** drop box, select the desired output size. By default, *Current View* is selected, which saves the image at the size currently shown on the screen. You can choose from a list of preset sizes, or select *Custom* and enter the desired values in the **Width** and **Height** edit boxes.
8. Click **Save**. The view is exported.

Part 9

Customization

Screen Settings	page 193
Managing View Windows	page 203
Custom Viewing	page 209
Catalogs & Elements	page 221
Materials, Colors & Patterns	page 235
Line Styles	page 243
Text & Dimension Styles	page 249
Light Sources	page 257

Chapter 31

Screen Settings

3D Home Architect® Landscape Design's screen environment is totally customizable, so you can create a work environment that is both functional and comfortable according to your personal needs.

This chapter describes how to display, hide and move screen components, change the color of the drawing area and toolbar areas, and improve graphics display.

Displaying/Hiding Toolbars

There are 10 toolbars available for display. (By default, not all of them are displayed.) You can hide or show individual toolbars by setting your workspace options. When you display a toolbar, it is displayed in one of the toolbar areas which are located directly above and below the drawing area. Note that if you hide a toolbar that is displayed in a tab, the tab is hidden from view as well.

To hide or show toolbars:

1. Select **Settings > Toolbars**.
2. Check the toolbars that you want to display, and uncheck those that you do not want to display.
3. Click **OK**.

Tip: If a toolbar is currently floating freely on the screen, you can hide it by clicking the close button on its title bar, or right-clicking its title bar and selecting **Hide**.

Displaying Toolbars in Tabbed Format

You can display any toolbar in tabbed format, meaning a tab will be added to the row of toolbar tabs below the menu bar.

To display a toolbar in a tab:

1. Select **Settings > Toolbars**.
2. Enable the check box of the toolbar you want to display in a tab.
3. Enable the toolbar's **Tabbed** check box.
4. Click **OK**.

Displaying Toolbars in a Non-tabbed Format

By default, the Landscape and Terrain toolbars are displayed in tabs below the menu bar. You can change any tabbed toolbar to be displayed as a non-tabbed, free-standing toolbar.

To display toolbars in non-tabbed format:

1. Select **Settings > Toolbars**.

2. Make sure the check box of the toolbar you want to display is enabled.
3. Disable the toolbar's **Tabbed** check box.
4. Click **OK**.

Changing the Background Color of Toolbars

You can change the general background color of individual toolbars by changing your workspace options. This applies to both tabbed and free-standing toolbars.

To change the background color of toolbars:

1. Select **Settings > Toolbars**.
2. Click the Color box next to the toolbar you want to change.
3. In the **Color** dialog, select or create the desired color, then click **OK**.
4. Click **OK** in the **Program Settings** dialog.

Changing the Color of Toolbar Areas

The program has two toolbar areas: one directly above the drawing area, and one directly below the drawing area. By default, the background color of these areas is dark blue. You can change this color in your workspace options.

To change the color of toolbar areas:

1. Select **Settings > Toolbars**.
2. Click the colored box next to the **Toolbar Areas** option.
3. In the **Color** dialog, select or create the desired color for your toolbar areas, then click **OK** to return to the **Program Settings** dialog.
4. Click **OK**.

Moving Toolbars

You can drag any non-tabbed toolbar to any location on the screen. At window edges, the toolbar will automatically dock itself according to the location. For example, if you drag it to the right edge of the screen, it will assume a vertical orientation.

If you drag it into the drawing window, it will float freely. You can then move it by dragging it by its title bar.

To move a toolbar:

1. Click and hold your mouse button over the left grip end of the toolbar (or its title bar if it is currently in the drawing area).



2. Drag the toolbar to the desired location.
3. Release the mouse button.

Displaying/Hiding the Catalog Panel

By default, the catalog panel is displayed on the right side of the screen, as it is an essential component of the program. You can hide the catalog panel from view if you want.

To display or hide the catalog panel:

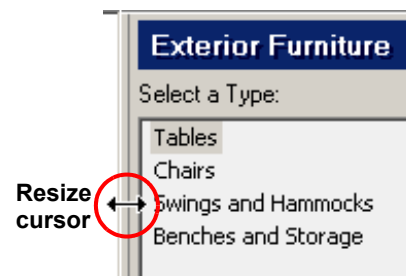
1. Select **Settings > Toolbars**. Or, select **Settings > Program Settings** (or click the Program Settings button on the Settings toolbar) and select the Workspace tab in the **Program Settings** dialog.
2. In the *Tool Display* area, check or uncheck the **Catalog Panel** check box.
3. Click **OK**.

Resizing the Catalog Panel

When the catalog panel is docked at one side of your screen, you can make it narrower or wider by simply clicking and dragging its edges. If you have moved the catalog panel away from the edge, so it is free-floating, you can resize it by clicking and dragging its corners.

To resize the catalog panel if it is docked:

1. Position your pointer over the panel's left outside edge. (If you have moved the catalog panel to the left side of the screen, position your pointer over the right edge.) Watch for the Resize cursor to appear.



2. Click and drag the edge of the panel to stretch it in the desired direction.
3. Release your mouse button.

To resize the catalog panel if it is free-floating:

1. Position your pointer over one of the panel's corners.
2. Click and drag to stretch the panel.
3. Release your mouse button.

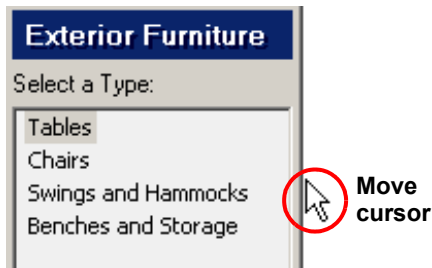
Moving the Catalog Panel

If the catalog panel is docked on one side of the screen, you can move it by clicking and dragging its outside edge. If you move a panel to the side of the screen, it will automatically dock itself to the edge of the screen. Otherwise, the panel is displayed in a free-floating window.

If the panel is free-floating, you can move it by clicking and dragging its title bar.

To move the catalog panel when it is docked:

1. Position your pointer over the panel's outside edge (the edge that is at the side of the screen). Watch for the Move cursor.



2. Click and drag the panel to move it.
3. Release your mouse button.

To move the catalog panel when it is free-floating:

1. Position your pointer over the panel's title bar.
2. Click and drag the panel to move it.
3. Release your mouse button.

Displaying/Hiding the Status Bar

The Status bar can be toggled on and off as needed.

To display/hide the Status bar:

1. Select **Settings > Toolbars**. Or select **Settings > Program Settings** and select the Workspace tab in the **Program Settings** dialog.
2. In the *Tool Display* area, select or clear the **Status Bar** check box.
3. Click **OK**.

Changing the Background Color of the Drawing Window

By default, the color of the main drawing window is white. You can select a different color if you like. Note, however, that selecting a different background color can make some elements difficult to see depending on their color settings.

To change the background color of the drawing window:

1. Select **Settings > Toolbars**. Or, select **Settings > Program Settings** (or click the Program Settings button on the Settings toolbar) and select the Workspace tab in the **Program Settings** dialog.
2. Click the colored box next to the **Background** option.
3. In the **Color** dialog, select or create the desired color for your drawing area, then click **OK** to return to the **Program Settings** dialog.
4. Click **OK**.


Hardware Acceleration

The **Hardware Acceleration** option controls how your screen responds during a work session. By default, hardware acceleration is enabled.

Hardware acceleration increases the speed of your graphics display. When hardware acceleration is enabled, your computer takes advantage of any installed graphics card that supports hardware acceleration. If no card exists, and the **Hardware Acceleration** option is still enabled, your computer automatically defaults to slower software acceleration, which uses the *Windows* implementation of OpenGL. For detailed information about OpenGL, see the *OpenGL* topic in the online help.

In most cases, it is best to enable the **Hardware Acceleration** option. However, problems sometimes arise with graphics cards on which hardware acceleration is poorly implemented. If you are experiencing display-related problems like scrambled line patterns, see the next topic, *Improving Graphics Display*.

To enable or disable hardware acceleration:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the General tab.
3. In the *Graphics* area, check or uncheck the **Hardware Acceleration** check box.
4. Click **OK**.

Improving Graphics Display

The type of graphics card you have can affect the way the program's graphics are displayed on the screen. If the display seems unstable or contains some graphic artifacts (e.g. large pixels), here are some tips on how you may be able to improve the display:

1. Disable pre-selection. Pre-selection highlights elements when you hover your pointer over them, and displays tooltips. See *Disabling Pre-Selection* on page 15.
2. Lower your screen resolution (to 1024 x 768, for example). To access this setting, right-click your *Windows* desktop and select **Properties**. In the **Display Properties** dialog, select the **Settings** tab.
3. Lower your color setting in *Windows*. For example, if your colors are set to **True Color (32 bit)**, change the setting to **High Color (16 bit)**. To access this setting, right-click your *Windows* desktop and select **Properties**. In the **Display Properties** dialog, select the **Settings** tab.
4. If the above three methods fail to improve the graphics display, disable Hardware Acceleration in your Program Settings. See *Hardware Acceleration* on page 196.

Chapter 32

Building Locations

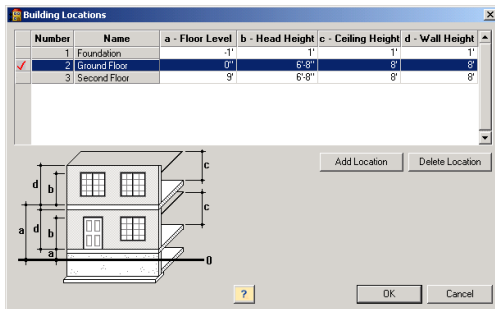
If you have opened a project from another *3D Home Design* program which contains a house model, the building elements in the model are controlled by your building location settings. For the most part you don't need to worry about building locations in *3D Home Architect® Landscape Design*, since most elements are inserted on the terrain. The only time you may want to adjust a building location is when inserting a deck, since decks are inserted at a height relative to the current building location.

This chapter describes how to view and define building locations, and identify the current building location.


Viewing and Defining Building Locations

When you define building locations, you are basically doing two things:

- setting the wall height for each floor (level) in your model
- specifying where each floor is positioned relative to the ground (zero)



To view building location settings:

1. Select **Settings > Building Locations**, or click the Building Locations button on the Settings toolbar. 

Below is a brief description of each building location property.

Number. A reference number for the location.

Name. The location's name (e.g. Ground Floor).

Floor Level. Height of floor base above ground level (0).

Head Height. Height of tops of windows and wall openings relative to the floor level.

Ceiling Height. Height of underside of ceiling surface relative to the floor level.

Wall Height. Physical height of the walls on the location.

To change the properties of a building location:

1. In the **Building Locations** dialog, click on the property you want to change. You can

change location names or any of the numerical settings.

2. Type the value you want.
3. Press **Enter**.

To add a new building location:

1. In the **Building Locations** dialog, click the Add Location button. A new location is added to the bottom of the list.

Note: By default the new location will adopt the numerical settings of the currently selected location.

2. Specify the location's properties. To specify a property, click on the current value, type the new value, then press **Enter**.

Note: When you add a location to your list, it does not become the current location unless you select it in the list or edit its properties.

To delete a building location:

1. In the **Building Locations** dialog, click on one of the location's fields to make it the current location.
2. Click **Delete Location**.

Note: You cannot delete a location if it contains any elements. Also, you cannot delete a location if it is the only one in the list.

Current Building Location

If you are inserting a deck, you should take note of the current building location, since the height of the deck is relative to the floor level of the current building location.

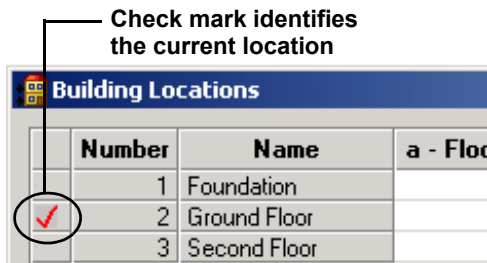
To identify the current building location:

- Take a look at the building locations drop box on the Basic View Control or Advanced View Control toolbar.



or

- See which location is checked in the **Building Locations** dialog.



To make a different location current within the current view:

- Click on the building locations drop box on the Basic View Control or Advanced View Control toolbar and select the desired location.
- or
- In the **Building Locations** dialog, click in the far left field of the location you want to make current. A check mark indicates the location is now current.

Location Dimming

Location dimming applies to the building elements of an architectural model that was created in another *3D Home Design* program. When a particular location is current, building elements on all other visible locations are dimmed. This makes it easier to edit elements on the current location because it is more obvious which elements are part of the current location.

By default, elements on other locations are dimmed by 90%. You can adjust the dimming so that it is lighter or darker according to your preference.

Note: Location dimming has no effect on landscape elements.

To change the dimming percentage:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the Workspace tab.
3. Type the desired dimming percentage in the **Dimming Percentage** edit box, or use the arrows to scroll up or down through a list of values.
4. Click **OK**.

Making Elements on All Locations Selectable in 2D Plan View

If you have opened a project from another *3D Home Design* program which contains a house model, only elements on the current building location can be selected in 2D plan view, even if elements on other locations are visible. If you want to make elements on all locations selectable, you need to change one of your program settings.

To make elements on all locations selectable in 2D plan view:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the Drawing Aids tab.
3. In the *Drawing Assistance* area, uncheck the **Select elements on current location only while in plan view** check box.
4. Click **OK**.

Chapter 33

Managing View Windows

By default, your project has one view window called Standard. You can create additional view windows using the View Manager. Each view window can have different view settings. For example, you may want to keep the wireframe 2D plan view in the Standard view window, and create a new view window containing a 3D view of your design.

When you create new view windows, you can switch between open view windows using the **Window** menu. You can also turn your view tabs on, which will display a row of tabs below the drawing area. This provides instant point-and-click access to all your view windows.

You can display multiple view windows at the same time using the Tile Open Views and Cascade Open Views tools. View windows can be moved, resized and closed to create the exact arrangement you want.

This chapter describes all the functions of the View Manager, how to navigate between view windows, and arrange view windows.

Using the View Manager

The **View Manager** contains a listing of view windows and lets you open, close, create, and edit views.

By default, your project contains one view window called Standard. The scale of the view in this window is 1:48, or 1/4" = 1'-0".

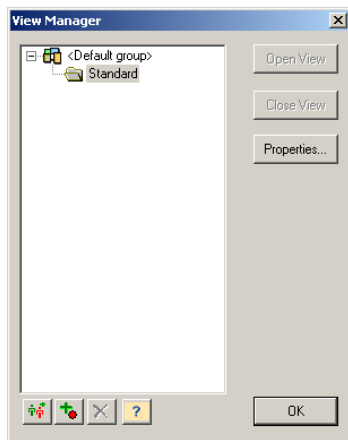
Using the New View tool you can create new view windows. Each window can have different view settings. For example, you may want to display a wireframe, 2D plan view in the Standard view window, and create a new view window containing a 3D view of your model.

Using the **Window** menu or view tabs you can switch between view windows as needed to see different views of your design. This can eliminate the need to constantly change the current view settings to see a particular view of your design. You can even display two or more view windows at the same time.

You can edit the name and scale of views listed in the **View Manager**.

To access the View Manager:

1. Select **View > View Manager**.




Creating New View Windows

By default, your project contains one view window called Standard. You can use the View Manager to create new view windows and specify different view settings for each window. For example, you may want to create a view window dedicated to 3D viewing only.

Views are stored in groups for easy organization and navigation. You can add view windows to the default group, or create your own groups if you want. For example, you might want to create a group for 3D views only, then add a set of 3D view windows to that group.


To create a new group in the View Manager:

1. Select **View > View Manager**.
2. Click the Add Group button, or right-click in the View Manager's view window and select **Add Group**. A group is added to the list. 
3. Right-click the new group and select **Rename**.
4. Type a name for the group, then press ENTER.


To rename a group in the View Manager:

1. Right-click the group and select **Rename**.
2. Type the new name, then press ENTER.

To delete a group in the View Manager:

1. Make sure the group contains no views.
2. Select the group and click the Delete button, or right-click the group and select **Delete**. 

To create a new view in the View Manager:

1. Select the group you want to add the view to.
2. Click the New View button, or right-click and select **New View**. 
3. In the **View Properties** dialog, type a name for the view window, then select a print scale for the view.

The scale is the ratio of units on paper to real-world units. If the scale is set to 1:1 (12" = 1'-

0"), twelve inches on paper will represent one foot of your model. This would be a rather large printout. A scale of 1:12 (1" = 1'- 0"), however, would result in a smaller-scale view when the drawing is printed because every foot is represented by only one inch on paper.

4. Click **OK**. The view is added to the View Manager, and becomes the current view window.
5. Click **OK** in the **View Manager** dialog.
A new view window is created, and becomes the current view window.
6. Select the desired view settings for the new view window.


Turning View Tabs On

When you turn your view tabs on, a row of tabs are displayed below the drawing area. Each tab represents an open view in the View Manager.



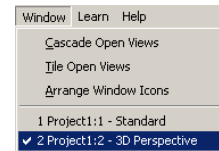
If you have not created any new views in the View Manager, only the Standard view tab is displayed.

To turn view tabs on:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar. 
2. In the **Program Settings** dialog, select the Workspace tab.
3. In the *Tool Display* area, check the **View Tabs** check box.
4. Click **OK**.

Switching Between View Windows

When you create a new view in the View Manager, the view appears in the program's **Window** menu.



Also, if you have turned your view tabs on, a view tab is created for the new view.

To make a view window the current view window, simply select it from the **Window** menu, or select the view's corresponding view tab below the drawing area.

Tiling View Windows

By default, only one maximized view window is displayed at a time. Using the Tile Open Views tool you can instantly tile all open view windows in the drawing area. This is a great way to see different views of your design while you are working on it. When you make a change in one view window, the design updates automatically in all other view windows.

To tile all open view windows:

1. Select **Window > Tile Open Views**.

Cascading View Windows

By default, only one maximized view window is displayed at a time. Using the Cascade Open Views tool you can instantly display all open view windows in a stacked format, with the current view window on top. Once the view windows are cascaded you can move and resize each one if you want.

To cascade all open view windows:

1. Select **View > Cascade Open Views**.

Returning to a Maximized View

If you have tiled or cascaded your open view windows, you can return to a maximized view (where only one view window is visible) by maximizing one of the open view windows.

To maximize a view window:

1. Click the Maximize button in the view window you want to maximize.

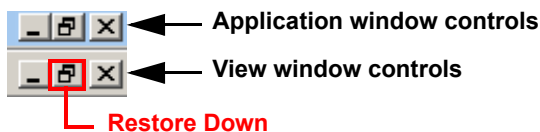


Restoring the Previous Arrangement of View Windows

If you tiled, cascaded or arranged your view windows, then maximized one of them, you can use the Restore Down button to return to the view window arrangement that was displayed before you used the Maximize button.

To restore the previous arrangement of view windows:

1. Click the Restore Down button in the top right corner of the current view window.



Closing View Windows

By default, the Standard view window is open when you start a project. Also, every time you create a new view window in the View Manager, that window is automatically opened for you. You can close individual view windows using the View Manager's **Close View** button, or by clicking the view window's Close button.

To close a view window from within the window itself:

1. Click the Close button in the top right corner of the view window.



To close a view window using the View Manager:

1. Select **View > View Manager**.
2. Select the view you want to close.
3. Click **Close View**.

Opening View Windows that You Have Closed

If you have closed a view window either through the View Manager or by clicking a view window's Close button, you can open it again using the View Manager's **Open View** button.

To open a view window:

1. Select **View > View Manager**.
2. Select the view you want to open.
3. Click **Open View**. The view window becomes the current view window. It appears on the **Window** menu as well as on a view tab if you have view tabs turned on.

Renaming a View Window

You can edit the name of a view window as it appears in the View Manager, in the program's title bar, and on the view tabs. You can do this in the View Manager, or by accessing the view window's properties.

To rename a view window when it is the current view window:

1. Select **View > View Properties**, or right-click in the view window and select **View Properties**.
2. In the **View Properties** dialog, type the new name in the **Name** edit box.

3. Click **OK**.

To rename a view window in the View Manager:

1. Select **View > View Manager**.
2. Right-click the view you want to rename, then select **Rename**. Or, select the view to rename and click the **Properties** button.
3. Type the new name and press **ENTER**.
4. Click **OK**.

Editing the Print Scale of a View

You can edit the print scale of a view by accessing the view's properties.

A view's print scale is the ratio of units on paper to real-world units. If the scale is set to 1:1 (12" = 1'- 0"), twelve inches on paper will represent one foot of your model. This would be a rather large printout. A scale of 1:12 (1" = 1'- 0"), however, would result in a smaller-scale view when the drawing is printed because every foot is represented by only one inch on paper.

Note that if you change the print scale, your 2D plan does not scale on the screen. It will only be scaled on paper when you print the drawing. The scale you specify in a view window's properties has a direct link to the **Print to Scale** option in the **Print** dialog.

Changing the print scale has no effect in 3D views, neither on the screen nor in printouts, unless it is an elevation view. This is because a model being viewed in 3D does not have concrete measurements like a flat, 2D view has.

Things like text and dimensions will scale on the screen when you change the scale because they are specified in real-world units, whereas the model on your screen is created using units that are only proportional to real-world units.

Regardless of a view's scale, things like text and dimensions will always print out at the size that was assigned to them at the time of insertion. For example, if you inserted text that had a 1/2" text height setting, the text will be 1/2" on paper, regardless of the view scale or what the text looks like on the screen.

To edit a view window's print scale when it is the current view window:

1. Select **View > View Properties**, or right-click in the view window and select **View Properties**.
2. In the **View Properties** dialog, select the desired scale from the **Scale** drop box.
3. Click **OK**.


To edit a view window's print scale in the View Manager:

1. Select **View > View Manager**.
2. Select the view to edit and click the **Properties** button.
3. In the **View Properties** dialog, select the desired scale from the **Scale** drop box.
4. Click **OK**.

Deleting View Windows

You can delete a view window by removing it from the View Manager.

To delete a view window:

1. Select **View > View Manager**.
2. Select the view to delete.
3. Click the **Delete** button, or right-click and select **Delete**. 
4. Click **Yes** to confirm that you want to delete the view.

Chapter 34

Custom Viewing

You can create your own custom 3D views and edit existing 3D views to suit your needs. For example, you can change the angle of the view, or the camera height. While in 3D view you can use a variety of navigation tools to walk through or fly around your plan.

3D Home Architect® Landscape Design also lets you view instant elevations of your design, and create custom elevations to suit your presentation needs. If you have an architectural model in your project, you can also draw a cut line through your model to create an interesting cross-section view of your model's interior.

Creating New 3D Views

You can create a new 3D view by placing a new camera in your 2D plan view. Once you've inserted the camera, you specify the camera angle and viewing field angle by rotating and clicking your mouse.

To create a new 3D view:

1. While in 2D plan view, select **View > 3D Model View > Place New Camera**, or click the 3D Model View button on the Basic View Control or Advanced View Control toolbar and select **Place New Camera**. A camera is attached to your cursor, ready to be inserted.
2. Click to insert the camera where you want it.
3. Move your cursor in the direction you want to view. Moving the cursor back and forth changes the camera angle.
4. Once you have the desired direction and angle in place, click to select a location for the target.

Once you've defined the position and angle of your camera, the 3D view is instantly displayed.

The view will appear on your **3D Model View** menu and toolbar flyouts for easy access. (By default, the first view you create is called Camera1).

Changing a 3D View

The position of the camera determines the point you are viewing your design from while in 3D view. By moving your camera you can change your viewpoint. See *Changing Your Viewpoint* on page 210.

If you are currently in a 3D view, you can use navigation tools such as Walk Around and Slide to move the camera dynamically. You can find these topics later in this chapter, starting on page 214.

You can also change what you're focused on in a 3D view by moving the target. You can do this by displaying your cameras in 2D plan view and dragging the target icon to a new spot. See *Changing the Target of Your View* on page 211.

You can also change your camera height (page 211), target height (page 211) and viewing field angle (page 213).

Turning Cameras On and Off

Every 3D view is controlled by a virtual "camera". The **Cameras On/Off** function displays a camera icon on the screen. This gives you an idea of where you are viewing from. If you click on a camera, the target and viewing field angle become highlighted. This lets you know what the camera is focused on, and how much of your design is included in the view.

When you have your cameras turned on, you can move cameras and their targets. You can also view the 3D view associated with a camera using the Look Through tool on a camera's right-click menu.

To turn cameras on:

- Select **View > Viewing Aids > Cameras On/Off**, or
- Click the Viewing Aids button on the Basic View Control or Advanced View Control toolbar and select **Cameras On/Off**

In 2D plan view, all cameras for all 3D views are visible. (By default there are two: one for the 3D Perspective, and one for the 3D Overview.) You may need to zoom out to see them.

Changing Your Viewpoint


Moving a camera changes the angle you are viewing from in 3D. You can change the position of a camera by turning your cameras on, then moving the camera in 2D plan view. When you switch back to 3D view, the view will be changed accordingly.

To change your viewpoint for a 3D view:

1. Make sure you are in 2D plan view.
2. Turn your cameras on. (See *Turning Cameras On and Off* on page 210.)

By default, the camera for the 3D Perspective view is located to the left of the model. The

camera for the 3D Overview is located towards the right side of the model.

3. Click on the camera you want to move.
4. Hover your pointer over the camera's blue grab handle to display the Move cursor. Or, right-click in the drawing area and select **Move Camera**. 
5. Click and drag the camera to move it where you want it.

Changing the Camera Height

The height of your camera determines the height you are viewing your model from. A positive camera height lets you look down on your model, while a negative camera height lets you look up at your model. A camera height of 0 would be like standing on the ground and looking at your landscape.

The default camera height in the 3D Perspective view is 5'-6". In the 3D Overview, the camera height is set to approximately 32'.

To change the camera height:

1. With the 3D view displayed, right-click in the drawing window and select **Camera Properties**.
2. In the **Camera Properties** dialog, type the height you want in the **Camera Height** edit box, or use the arrows to scroll up or down through a list of values.
3. Click **Apply** to see the change.
4. If the view is acceptable, click **OK**.


Changing the Target of Your View

The target of a 3D view is the area you are focused on, or looking towards. You can change the position of a target by turning your cameras on, then moving the target in 2D plan view. When you switch back to 3D view, the view be changed accordingly.

To change the target of a 3D view:

1. Make sure you are in 2D plan view.
2. Turn your cameras on. (See *Turning Cameras On and Off* on page 210.)

By default, the camera for the 3D Perspective view is located to the left of the model. The camera for the 3D Overview is located towards the right side of the model.

3. Click on the camera whose target you want to move. The target is usually inside or near your model. It is marked with a blue grab handle.
4. Hover your pointer over the target's grab handle to display the Move cursor. Or, right-click in the drawing area and select **Move Target**. 
5. Click and drag the target to move it where you want it.

Changing the Target Height

Raising or lowering your target can increase or decrease the steepness of the angle you are viewing from when looking through the camera.

To change the target height:

1. With the 3D view displayed, right-click in the drawing window and select **Camera Properties**.
2. In the **Camera Properties** dialog, type the height you want in the **Target Height** edit box, or use the arrows to scroll up or down through a list of values.
3. Click **Apply** to see the change.
4. If the view is acceptable, click **OK**.

Viewing in Perspective Mode

When a 3D view is set to a perspective view mode, objects in the scene that are far away appear as if they are smaller; objects closer seem larger. This creates a more realistic view of the model than parallel mode because distance plays

a part in the view. By default, the 3D Perspective view has its view mode set to perspective mode.



If the current 3D view is in parallel mode, you can change the view mode to perspective mode if you want.

To change to a perspective view mode:

1. With the 3D view displayed, right-click in the drawing window and select **Camera Properties**.
2. In the **Camera Properties** dialog, enable the **Perspective** radio button.
3. Click **Apply** to see the change.
4. If the view is acceptable, click **OK**.

If you want to change the distance you are viewing from, you need to change the view angle in the camera properties, or move your camera.

Viewing in Parallel Mode

When a 3D view is set to a parallel view mode, the view is set from a common angle, and distance is eliminated from the view. This provides an instant, close-up view of your design.

By default, the 3D Overview has its view mode set to parallel mode.



If the current 3D view is in perspective mode, you can change the view mode to parallel mode if you want.

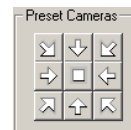
To change to a parallel view mode:

1. With the 3D view displayed, right-click in the drawing window and select **Camera Properties**.
2. In the **Camera Properties** dialog, enable the **Parallel** radio button.
3. Click **Apply** to see the change.
4. If the view is acceptable, click **OK**.

You can change the angle you are viewing from by selecting a preset camera angle in the **Camera Properties** dialog, or by moving the camera.

Selecting a Preset Camera Angle

A convenient and effective way to quickly view your drawing from a number of different angles is to use the Preset Cameras in your camera properties.



The nine preset camera angles show your drawing:

- looking down at an angle from above the four corners
- looking straight on from the four sides
- looking straight down from directly above (90°)

To select a preset Camera angle:

1. With the 3D view displayed, right-click in the drawing window and select **Camera Properties**.
2. In the **Camera Properties** dialog, click on one of the buttons in the *Preset Cameras* area.
3. Click **Apply** to see the change.
4. If the view is acceptable, click **OK**.

Note: You can change your viewing angle to any angle you want by moving the camera or using one of the dynamic navigation tools.

Changing the Viewing Field Angle

The viewing field can only be changed in the 3D Perspective view, or views with their view mode set to Perspective.

The viewing field refers to your field of vision. It works like a camera lens: higher values produce a wide-angle view; lower values produce a close-up view.

Sometimes changing the viewing field angle makes it seem like you are zooming in or out. This is because for wide-angle views, the program needs to shrink the image to provide enough screen space to contain the view. Conversely, the

program enlarges the image to fill the screen at smaller view angles, creating a close-up view.



45° Viewing Field Angle



120° Viewing Field Angle


To change the viewing field angle:

1. With the 3D view displayed, right-click in the drawing window and select **Camera Properties**.
2. In the **Camera Properties** dialog, type the desired angle in the **View Angle** edit box, or use the slider to increase or decrease the angle.
3. Click **Apply** to see the change.
4. If the view is acceptable, click **OK**.

Walking Around in 3D View

When you are in a 3D view, you can use the Walk Around tool to walk around your landscape plan. You can walk forward, backward, left or right.

To walk around in 3D view:


1. Select **View > Zoom and Navigate > Walk Around**, or right-click in the drawing area and select **Walk Around**, or click the Walk Around button on the Zoom and Navigate toolbar. 
2. Click and drag in the direction you want to move.
 - To move forward, click and drag upward.
 - To move backward, click and drag downward.
 - To walk left or right, click and drag left or right.

If you click and drag up to the left, your path of motion will curve upward to the left, and so forth.

Flying Around Your 3D Model

In a 3D view, the Fly Around tool revolves the camera around the target.

To fly around your model:


1. Select **View > Zoom and Navigate > Fly Around**, or right-click in the drawing area and select Fly Around, or click the Fly Around button on the Zoom and Navigate toolbar. 
2. Use your mouse button to orbit the camera. Your options are described below.
 - Click and hold the mouse button to slowly rotate the camera around the target on a level plane.
 - Drag toward the top of the screen to make your model tilt downward like a boat coming off a wave.
 - Drag toward the bottom of the screen to make your model tilt up like a boat riding onto a wave.

- Drag to the right to rotate the model in a clockwise direction.
- Drag to the left to rotate the model in a counterclockwise direction.

Sliding in a 3D View

In a 3D view, the Slide tool moves both the camera and target at the same time.


To slide in a 3D view:

1. Select **View > Zoom and Navigate > Slide**, or right-click in the drawing area and select **Slide**, or click the Slide button on the Zoom and Navigate toolbar. 
2. Once **Slide** is selected, you can do the following:
 - Drag right to move your view to the left.
 - Drag left to move your view to the right.
 - Drag up (toward the top of the screen) to move your view down (toward the bottom of the screen).
 - Drag down to move your view up.

Spinning the View Using the Look Around Tool

In a 3D view, the Look Around tool revolves the target around the camera.

To spin the view:

1. Select **View > Zoom and Navigate > Look Around**, or right-click in the drawing area and select **Look Around**, or click the Look Around button on the Zoom and Navigate toolbar. 
2. Once **Look Around** is selected, you can do the following (presuming that your target is located inside or near the model):
 - Drag right to move the target in a counterclockwise direction. Your design orbits around you in a clockwise direction.
 - Drag left to move the target in a clockwise direction. Your design orbits around you in a counterclockwise direction.

- Drag up to lower the height and shorten the distance of the target. Your view becomes high-angle, and your design moves toward the top of the screen.
- Drag down to raise the height and lengthen the distance of the target. Your view becomes low-angle, and your design moves toward the bottom of the screen.

Note: Be careful when using the Look Around tool. It is very easy to lose sight of your design since the camera's "eye" is fixed in one direction only. It does not move to follow the orbiting target. Therefore, your field of vision is limited, and your design can quickly get above, below or behind you.

Resetting the Camera in a 3D View

If you have moved your camera, either by dragging it in 2D plan view or using a navigation tool like Walk Around or Slide, you can use the Reset Camera tool to move the camera back into its original position. Note that this tool is only available when the current view is a 3D view.

To reset the camera to its original position:

1. Select **View > Zoom and Navigate > Reset Camera**, or click the Reset Camera button on the Zoom and Navigate toolbar.

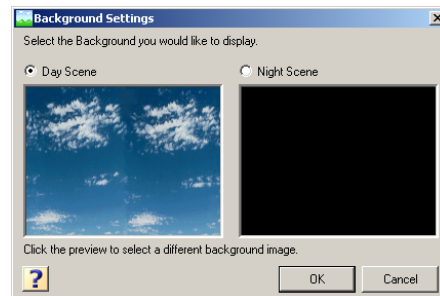


Selecting a Background for 3D Views

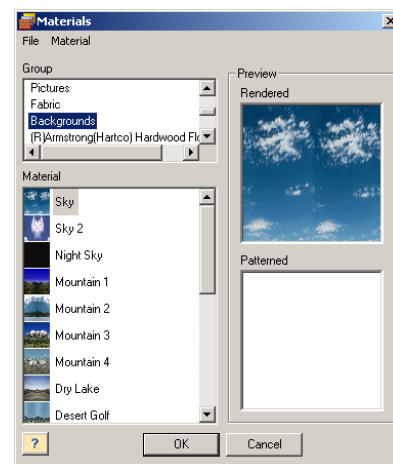
By default, a sky image is displayed behind your model when you are in a 3D view. You can select a different image to display, including custom bitmaps that you have imported, or switch to a night scene.

To select a background for the view:

1. Select **Settings > Background Settings**, or click the Background Settings button on the Settings toolbar.



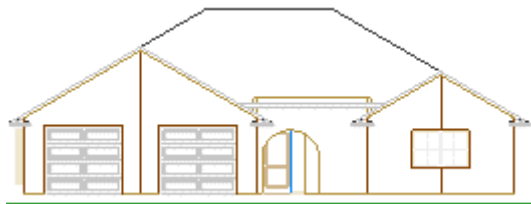
2. In the **Background Settings** dialog, select either the Day Scene or Night Scene radio button. You would want to switch to a night scene if you are doing a nighttime 3DTrueView™ rendering of your model.
3. Click on the current preview to access the **Materials** dialog.



4. In the **Materials** dialog, select a background from the **Materials** list. To add a material to the list (if you have your own bitmap, for example), see *Customizing the Materials Library* on page 236.
5. Click **OK** in the **Materials** dialog.
6. Click **OK** in the **Background Settings** dialog.

Viewing Elevations

Elevations are 2D views that show a particular side of your design (front, rear, left or right) as if you were looking at it face on. Elevation views are typically used if you have a house in your design. While in an elevation view you can zoom in and out as well as change the display type.



Sample Elevation

To view an elevation:

1. Select **View > Elevation View**, or click the Elevation View button on the Advanced View Control toolbar.
2. From the flyout, select the elevation you want to view (Front, Back, Right or Left).

Tip: If you have your elevation marks turned on in your 2D plan view, you can switch to an elevation view by selecting an elevation mark, right-clicking it, then selecting **View Elevation**.

Turning Elevation Marks On and Off

You can use the Elevation Marks On/Off tool to display elevation marks in your 2D plan view. An elevation mark contains the label given to the elevation in the elevation's properties, as well as a

target arrow that identifies the view direction of the elevation.



Back Elevation Mark

By default, four marks are displayed, one for each of the default elevations on the Elevation View menu. If you have created a custom elevation, a mark is displayed for that elevation as well.

To turn elevation marks on or off:

- Select **View > Viewing Aids > Elevation Marks On/Off**, or
- Click the Viewing Aids button on the Basic View Control or Advanced View Control toolbar and select **Elevation Marks On/Off**

The marks are located at the extents of your drawing, so you may need to zoom out to see them.

If you select and right-click an elevation mark, you can access a number of editing tools such as Properties, Move and Move Target. Selecting View Elevation displays the elevation associated with that mark.

Moving Elevation Marks

By default, elevation marks are centered with your model, which means the model is centered on the screen when you view the resulting elevation view. If you move an elevation mark in your 2D plan view, the model may be moved left or right when you display the elevation view. Moving a mark closer to or farther away from the model has no effect on the resulting elevation view.

To move an elevation mark:

1. Select the elevation mark in 2D plan view.
2. Hover your pointer over the mark's blue grab handle to display the Move cursor. Or, right-click in the drawing area and select **Move**.



3. Click and drag the mark to move it where you want it.
4. Right-click and select **View Elevation** to see the resulting elevation.

Changing the Target of an Elevation

By default, elevation marks point straight at your model. The result is a completely face-on view when you display the resulting elevation view. If you rotate an elevation mark, you change the target of the elevation. This focuses the view on a different part of your design when you display the elevation view.

To change the target of an elevation:

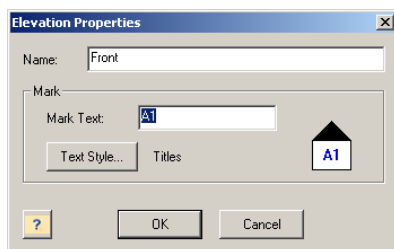
1. Make sure your elevation marks are turned on.
2. In 2D plan view, select the mark whose target you want to change.
3. Right-click and select **Move Target**.
4. Click and drag to rotate the mark so it is pointing in a different direction.
5. Right-click and select **View Elevation** to see the result.

Editing Elevation Properties

You can edit the name of an elevation as it appears on the **Elevation View** menu, as well as edit the name and text style of an elevation mark.

To edit elevation properties:

1. If the elevation view is currently displayed, right-click and select **Elevation Properties**. If you are currently in 2D plan view, select the elevation mark, then right-click and select **Properties**.



2. To edit the name of the elevation as it appears on the **Elevation View** menu, edit the name in the **Name** edit box.
3. To edit the text that appears on the elevation mark, edit the text in the **Mark Text** edit box.
4. To apply a different text style to the elevation mark, click the **Text Style** button and make a selection from the Text Styles dialog. You can also edit the current text style if you want.
5. Click **OK**.

Deleting an Elevation

You can delete an elevation from the **Elevation View** menu by deleting its corresponding elevation mark in 2D plan view.


To delete an elevation:

1. Make sure your elevation marks are turned on.
2. In 2D plan view, select the mark to delete.
3. Press the **Delete** key on your keyboard, or right-click and select **Delete**.

Creating a Custom Elevation

You can create a custom elevation by inserting an elevation mark in your 2D plan view. Once you've inserted the mark, which represents your viewpoint, you can rotate it using your mouse to define the view direction.

To create a custom elevation:

1. Make sure you are in 2D plan view.
2. Turn your elevation marks on. This is not necessary, but we recommend it so that you can see where other elevation marks are located. The default elevation marks are located at the extents of the terrain, so you may need to zoom out to see them.
3. Select **View > Elevation View > Create New Elevation**, or click the Elevation View button on the Advanced View Control toolbar and select **Create New Elevation**. An elevation mark is attached to your cursor, ready to be inserted. 

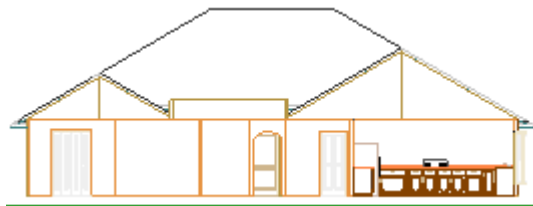
4. Click to insert the new elevation mark. This represents your viewpoint, so naturally you would select a point in front of the model side you want to look at in your elevation.
5. Move your cursor to rotate the arrow on the elevation mark and define the view direction. Once it is pointing in the desired direction (usually towards your model), click to finish.

Once you've positioned the elevation mark, the resulting elevation is instantly displayed. It is also added to the **Elevation View** menu and toolbar flyout for easy access. (By default, the first view you create is called Elevation1.)

Tip: You can change the name of the elevation as well as edit the elevation mark properties by editing the Elevation Properties.

Creating a Section View

If you have opened a project from another *3D Home Design* program which contains an architectural model, you can cut through any portion of your model to create a section view. Section views are a great way to see the interior features of your model that you are not able to see from the outside.



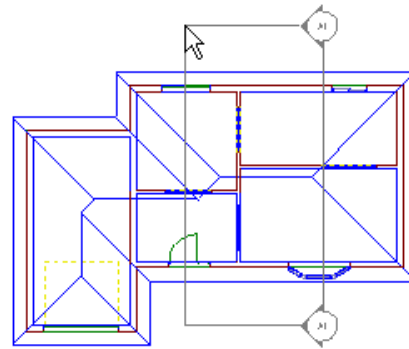
Sample Section

To create a section view, you draw a section line through your model in 2D plan view, then click to define the view direction and depth.

To create a section view:

1. Make sure you are in 2D plan view.
2. Select **View > Section View > Create New Section**, or click the Section View button on the Advanced View Control toolbar and select **Create New Section**.

3. Select two points to draw a line that cuts through your model. This is the line you will be viewing from.
4. Move your cursor in the direction you want to view. The more you move away from the section line, the deeper your view becomes. Once the bounding box is the desired distance and direction from the section line, click to finish.



Once you've defined the section mark, the resulting section view is instantly displayed. It is also added to the **Section View** menu and toolbar flyouts for easy access. (By default, the first view you create is called Section1.)

Viewing Section Views

If you have created section views, you can display them at any time using the Section View menu or toolbar.

To view a section view:

1. Select **View > Section View**, or click the Section View button on the Advanced View Control toolbar.
2. From the flyout, select the section you want to view.



Tip: If you have your section marks turned on in your 2D plan view, you can switch to a section view by selecting a section mark, right-clicking it, then selecting **View Section**.

Turning Section Marks On and Off

When you create a section, a section mark is displayed in the 2D plan view. The section mark contains markers at each end of the section line which indicate the direction of the section view. You can turn section marks on and off using the Section Marks On/Off tool.


To turn section marks on or off:

- Select **View > Viewing Aids > Section Marks On/Off**, or
- Click the Viewing Aids button on the Basic View Control or Advanced View Control toolbar and select **Section Marks On/Off**


Editing a Section View

You can edit a section view by moving the section mark associated with the section view, or by stretching the bounding box attached to the section line. By moving a section mark you are changing your viewpoint. By stretching the bounding box, you are changing the depth of the view.

To change your viewpoint by moving the section mark:

1. In 2D plan view, make sure your section marks are turned on.
2. Click on the section mark.
3. Hover your pointer over the blue grab handle on the section line to display the Move cursor. Or, right-click in the drawing area and select **Move**. 
4. Click and drag the mark to move it where you want it.
5. Right-click and select **View Section** to see the result.

To change the depth of the section view:

1. In 2D plan view, make sure your section marks are turned on.
2. Click on the section mark.
3. Hover your pointer over the blue grab handle on the bounding box line to 

display the Stretch cursor. Or, right-click in the drawing area and select **Stretch**.

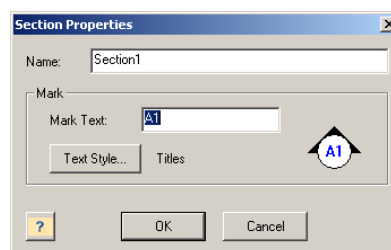
4. Click and drag to make the bounding box smaller or bigger. The bigger the box, the deeper the view.
5. Right-click and select **View Section** to see the result.

Editing Section Properties

You can edit the name of a section as it appears on the **Section View** menu, as well as edit the name and text style of a section mark.

To edit section properties:

1. If the section view is currently displayed, right-click and select **Section Properties**. If you are currently in 2D plan view, select the section mark, then right-click and select **Properties**.



2. To edit the name of the section as it appears on the **Section View** menu, edit the name in the **Name** edit box.
3. To edit the text that appears on the section mark, edit the text in the **Mark Text** edit box.
4. To apply a different text style to the section mark, click the **Text Style** button and make a selection from the **Text Styles** dialog. You can also edit the current text style if you want.
5. Click **OK**.

Deleting a Section View

You can delete a section from the **Section View** menu by deleting its corresponding section mark in 2D plan view.

To delete a section:

1. Make sure your section marks are turned on.
2. In 2D plan view, select the mark to delete.
3. Press the **Delete** key on your keyboard, or right-click and select **Delete**.

Displaying Framing

If you have opened a drawing from another *3D Home Design* program which contains a house, you can instantly view just your house frame using the Display Framing tool. Walls, floors, ceilings and roofs have a framing configuration assigned to them in their properties.



To display framing:

1. Select **View > Framing Visibility > Display Framing**.

Note: You can also use the View Filter to display framing. However, the framing will not be displayed on its own unless you turn everything else off.

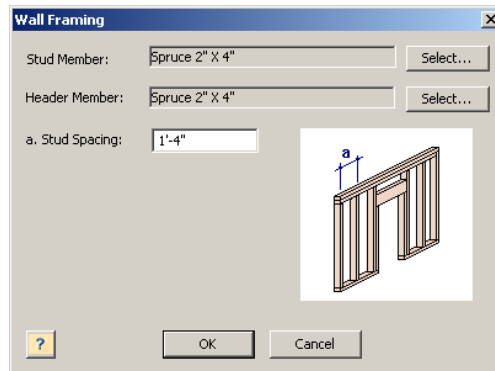
Note: Framing cannot be selected for editing. It is available for viewing purposes only.

To return to a non-framed view:

1. Select **View > Framing Visibility > Display All But Framing**.

To change framing members or member spacing:

1. In non-framed view, select the wall, floor, ceiling or roof whose framing you want to change.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. On the Basic property page, click the **Specify Framing** button.



4. Select the desired framing members and specify the spacing you want.
5. Click **OK**.

Chapter 35

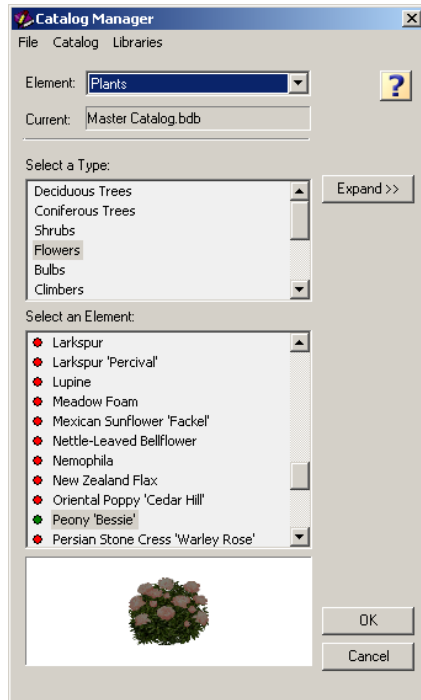
Catalogs & Elements

3D Home Architect® Landscape Design's Catalog Manager lets you add, edit and delete elements to suit your needs. You can also create new, custom catalogs that contain a specific selection of elements. You can open any catalog you want during a work session to gain access to the elements you want.

Another great feature is Save Element to Catalog, which lets you save an element that you have edited in your drawing to the current catalog.

Using the Catalog Manager

The program's Catalog Manager provides full control of new and existing catalogs.



Using the Catalog Manager you can:

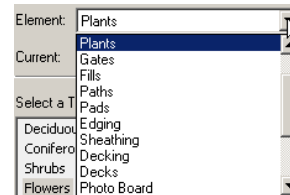
- View the contents and properties of any catalog
- Add groups and elements to a catalog
- Delete groups and elements from a catalog
- Edit elements in a catalog
- Import elements into a catalog from another catalog
- Create and save new catalogs

To access the Catalog Manager:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.

To view a listing of a particular element type:

1. Select the element from the **Element** drop box.



To view the properties of an element:

1. Select the element in the *Select an Element* window.
2. Select **Catalog > Element Properties**, or right-click and select **Properties**.

Adding a Group to a Catalog

All elements are organized by group. For example, pads are grouped under Concrete Pads and Masonry Pads. This helps you locate specific element types quickly. You can add groups to any catalog using the Add Group tool.

To add a group to the current catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. Select **Catalog > Add Group**, or right-click in the *Select a Type* window and select **Add Group**.
4. Type a name for the group, then press ENTER.
5. Select **File > Save Catalog**.

Renaming a Group in a Catalog

You can change the name of any group in a catalog using the Rename Group tool.

To rename a group:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.

2. Select the appropriate element type from the **Element** drop box.
3. In the *Select a Type* window, select the group you want to rename.
4. Select **Catalog > Rename Group**, or right-click and select **Rename Group**.
5. Type the new name and press ENTER.
6. Select **File > Save Catalog**.
4. In the *Select an Element* window, select the element to edit.
5. Select **Catalog > Element Properties**, or right-click and select **Properties**.
6. Edit the properties as desired. See *Working with Property Pages* on page 226 for more information.
7. Click **OK** to return to the **Catalog Manager**.
8. Select **File > Save Catalog**.

Deleting a Group in a Catalog

You can delete a group in a catalog provided it contains no elements.

To delete a group in a catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. In the *Select a Type* window, select the group you want to delete. Note that the group can only be deleted if it contains no elements.
4. Select **Catalog > Delete Group**, or right-click and select **Delete Group**.
5. Select **File > Save Catalog**.

Adding and Editing Elements in a Catalog

Every element has a number of different properties that determine its size, geometry and appearance. You can edit these properties to suit your needs. If you want you can create a new element instead of editing an existing one.

Note: You can't edit elements in the catalog panel. You need to use the Catalog Manager.

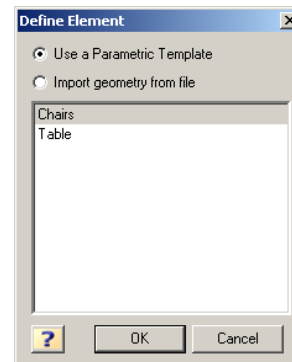
To edit an element in a catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. In the *Select a Type* window, select the group containing the element you want to edit.

To add a new element to a catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. In the *Select a Type* window, select the group you want to add the element to.
4. Select **Catalog > Add Element**.

Elements like furniture and accessories can be defined based on a set of general parameters, or by importing a 3D Studio file. If this is the case, you will see a dialog similar to the following:



To define the element by specifying size properties, select the **Use a Parametric Template** radio button, select the specific element type you want to create (chair, table, etc.), then click **OK**.


To import a 3D Studio file, select the **Import geometry from file** radio button, click **OK**, then select the desired 3D Studio file. Some elements will prompt you directly for a 3D Studio file because they do not have a parametric template. For more information, see *Importing 3D Studio Files* on page 224.

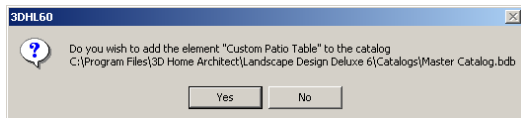
5. Define the element's properties. (See *Working with Property Pages* on page 226.)
6. Click **OK**. The element is added to the catalog.
7. Select **File > Save Catalog**.

Saving Edited Elements in Your Drawing to a Catalog

If you have edited the properties of an inserted element, you can save that element (and its custom properties) to the current catalog.

To add an edited element from your drawing into the current catalog:

1. Select **File > Catalogs > Save Element to Catalog**. Your pointer changes to a catalog cursor. 
2. Select the element in your drawing.



3. Click **Yes** to save the element. The element is added to the current catalog.

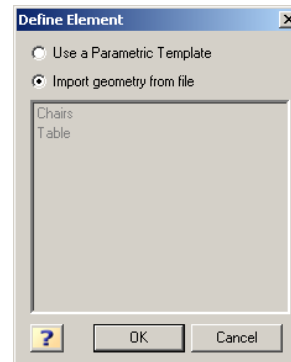
Importing 3D Studio Files

Many sites on the Internet offer free downloading of elements in 3D Studio (*.3ds) format. You can easily convert these files for use in *3D Home Architect® Landscape Design*.

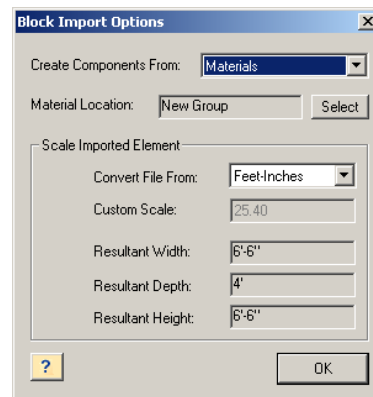
To import a 3D Studio file:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box (e.g. Exterior Furniture).

3. In the *Select a Type* window, select the group you want to add the element to.
4. Select **Catalog > Add Element**. In the **Define Element** dialog, select the **Import geometry from file** radio button.



5. Click **OK**.
6. In the **Open** dialog, select the 3D Studio file, then click **Open**.



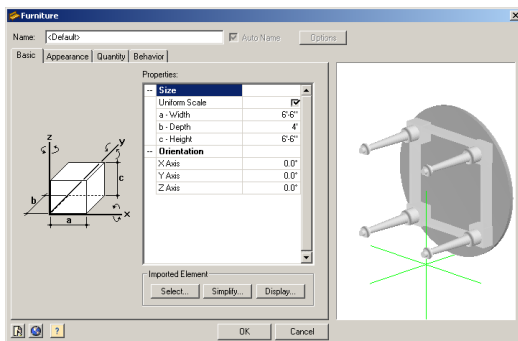
Since *3D Home Architect® Landscape Design* can only import 3D Studio files, the only selection in the **Create Components From** drop box is *Materials*, since 3DS objects are essentially an assembly of materials.

7. By default, the imported object's materials will be stored in a new group in your materials library. If you want to store them in

a specific group, click **Select**, then select the desired group.



8. Click **OK** in the **Material Group(s)** dialog.
9. When you import a 3D Studio block, there is usually no way of knowing what units the designer intended for the block. In the **Block Import Options** dialog, select the unit of measure in the **Convert File From** drop box that will result in a logical Resultant Width, Depth and Height. Selecting *Custom* lets you specify a custom scale in the **Custom Scale** edit box.
The scale is the multiplication factor of the units used for objects in the block. For example, if you're converting a file that you assume was created in feet and inches, the scale is 25.4.
10. Once logical dimensions are displayed, click **OK** in the **Block Import Options** dialog.
11. In the properties dialog, enter a name for the element in the **Name** edit box.



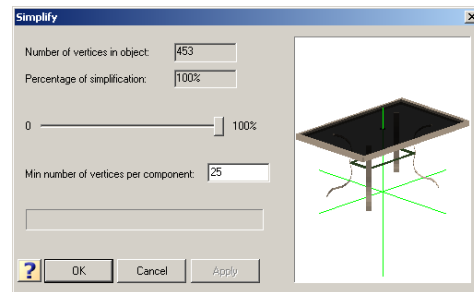
12. Define the element's properties. The element will already have size properties assigned to it that are taken from the 3D Studio file, but you can change these. You may need to edit the orientation of the element so that it inserts correctly in the drawing.
13. If you want to select a different 3D Studio file to apply to your new element, click the **Select** button in the *Imported Element* area of the properties dialog. Repeat steps 7-10.
14. Click **OK**. The new element is added to the catalog.
15. Select **File > Save Catalog**.

Simplifying an Element

If an element looks too complex in the preview window, you can simplify it by reducing the number of polygons used to display it. This applies only to some block elements like furniture and accessories.

To simplify an imported element:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Locate the element in the catalog.
3. Select **Catalog > Element Properties**.
4. In the property dialog, click **Simplify**.



5. To simplify the element, slide the ruler to the left. The **Number of vertices in object** and **Percentage of simplification** values update accordingly.
6. To put a limit on how much simplification can take place, enter a value in the **Min number of vertices per component** edit

box. The larger the number, the less simplified the element will become.

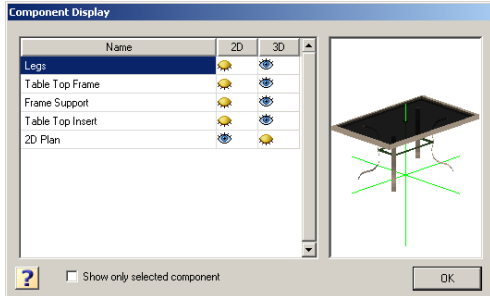
7. Click **OK** to return to the properties dialog.
8. Click **OK** in the properties dialog.
9. Select **File > Save Catalog**.

Controlling What Parts of an Element are Displayed



You can hide certain parts of an element from view by changing its display properties. This applies only to some block elements like furniture and accessories.

To control what parts of an element are displayed:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Locate the element in the catalog.
3. Select **Catalog > Element Properties**.
4. In the property dialog, click **Display**.



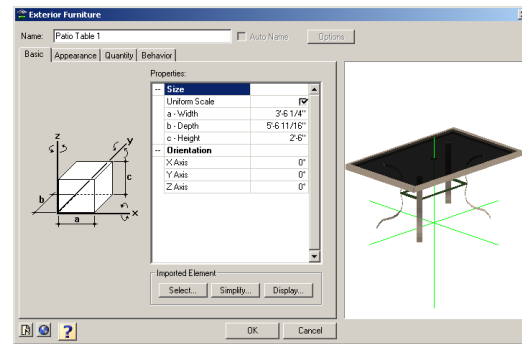
5. To display or hide a component from view in 2D and/or 3D view, select it in the list, then click the appropriate eye icon.

-  Component is displayed
-  Component is not displayed

6. Click **OK** to return to the properties dialog.
7. Click **OK** in the properties dialog.
8. Select **File > Save Catalog**.

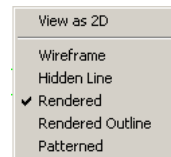
Working with Property Pages

When you access an element's property pages, a multi-tabbed dialog is displayed. The tabs and properties vary depending on the element. The most common property pages are **Basic**, **Appearance**, **Quantity** and **Behavior**. The name, notes and hyperlinks properties are common to all property pages.



Sample Properties Dialog

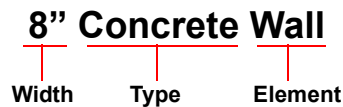
A preview of the element is shown in the preview window. By default, the image is displayed in a 3D rendered view. You can switch between 3D and 2D as well as select a different display mode by right-clicking in the preview window and making a selection from the menu.



When the image is in a 3D view, you can rotate it around by clicking and dragging with your mouse.

Using Automatic Name Generation

Names of elements are based on pre-defined formulas. The name **8" Concrete Wall** is made up of three variables:



Each variable is separated by a space. These variables and spaces are defined in the name's formula.

If you add or change an element, and select **Auto Name**, the element's name updates automatically in the catalog. For example, if you create a concrete wall, and define a width of 10", the name automatically becomes **10" Concrete Wall**.

Automatic name generation:

- Saves typing a name every time you add or edit an element
- Ensures consistency in catalogs
- Prevents duplicate entries if you forget to change a name

To use automatic name generation when adding or editing an element, enable the **Auto Name** check box next to the **Name** edit box in the element's properties dialog.

Note: If **Auto Name** is not selected, you can type any name you want in the **Name** edit box.

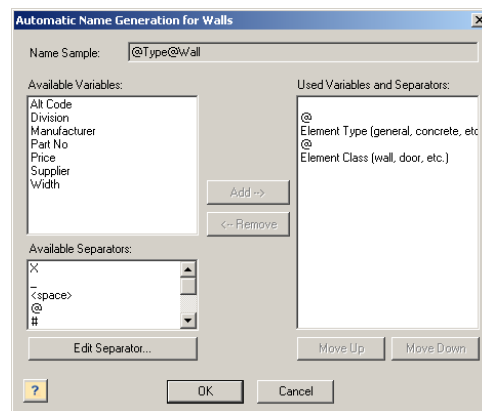
Editing the Name Generation Formula

When you add or edit a catalog element, you can modify the formula used to generate the element's name if you are using automatic name generation. Formulas are made up of variables (like Element Class and Element Type) and separators (spaces, symbols or characters).

Editing an element's name generation formula sets the formula for any new elements you create of that type. For example, if you edit the name generation formula for an 8" Brick Wall, any new walls you add to the catalog will use the new formula if you use automatic name generation.

To modify the formula used for an element's automatic name generation:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. Select the element to edit.
4. Select **Catalog > Element Properties**, or right-click and select **Properties**.
5. Click the **Options** button to the right of the **Auto Name** check box. The **Automatic Name Generation** dialog for that element type is displayed. The right pane (titled *Used Variables and Separators*) displays the current formula.

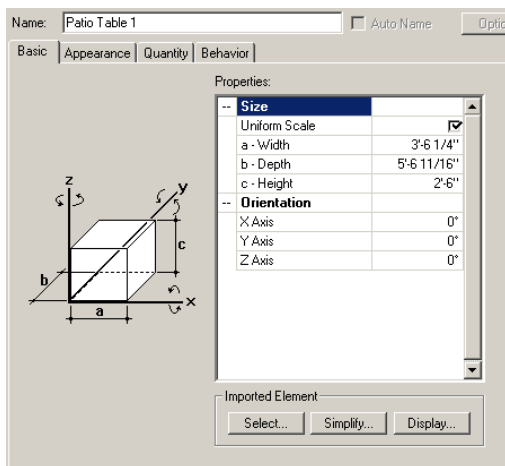


6. To remove a component from the formula, select it and click **Remove**.
7. To add a component to the formula, select the desired variable or separator in the *Available Variables* or *Available Separators* window and click **Add**.
8. To move a component in the formula, select the component and click **Move Up** or **Move Down**.
9. When you have finished modifying the formula, click **OK** to close the **Automatic Name Generation** dialog.
10. Click **OK** to close the element's properties dialog.

- In the **Catalog Manager**, select **File > Save Catalog**.

Basic Page

Most elements have a **Basic** property page, although the properties on this page will vary according to the element type. Generally there is a **Type** section, where you can select the specific element type, as well as a **Properties** section, where you can specify the dimensions of the element.



Sample Basic Page

Note: You can find detailed descriptions of size properties for specific element types in their respective chapters.

Changing an Element's Orientation

Symbol elements, such as furniture and light fixtures, are oriented in a logical fashion when you insert them in your drawing. You can edit the orientation of most symbol elements.

To change an element's orientation:

- On the Basic property page, click the appropriate arrow keys in the *Orientation* area to rotate the element.

(Y, Z) axes: Rotates the element front to back, and vice versa.

(X, Z) axes: Rotates the element towards its left or right side in 3D.

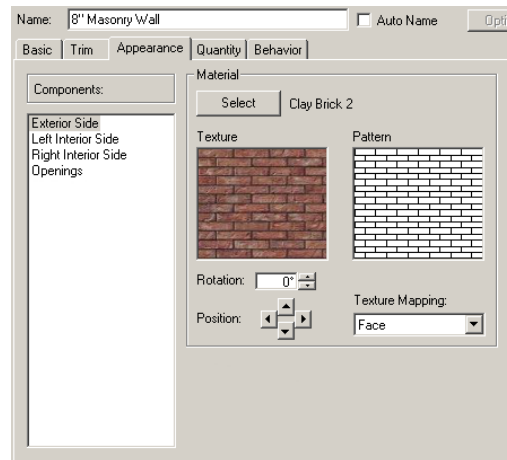
(X, Y) axes: Rotates the element left or right in 2D plan view.

Appearance Page

The **Appearance** properties page is common to most elements. It provides control over the materials applied to elements, which come into play when you view your model in Rendered or Patterned mode.

A material can be a texture, such as brick, or a color. This is what you see in Rendered mode. Materials also have a pattern assigned to them, which is what you see when you view in Patterned mode.

The contents of the **Components** window varies depending on the element. It contains a listing of the individual components that make up the element, so you can apply a different material to each component.

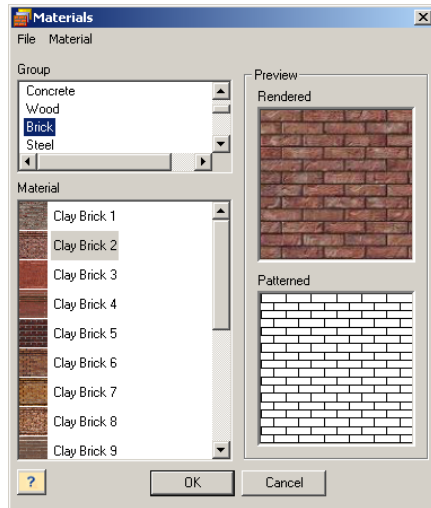




Sample Appearance Page

To change an element's material:

- In the *Components* pane, select the component whose material you want to change.

- In the *Material* area, click the **Select** button.



- In the **Materials** dialog, select the group containing the desired material. If you want to choose a solid color, select the Paint group.
- Select the material you want to use. The swatches in the preview windows update automatically. If you want to edit the material, click on one of the swatches to access the **Edit Materials** dialog. For information about editing materials, see *Editing Material Properties* on page 237.
- Click **OK** to return to the Appearance page.
- If you want to rotate the material on the element, enter an angle in the **Rotation** edit box, or use the arrows to scroll through a list of angles. This rotates the material in a clockwise direction.
 
- To shift the material on the element (left, right, up or down), use the **Position** arrows.
 
- Select another component in the *Components* pane and select a material for that component.
- When all your materials are defined, click **OK**.

Quantity Page

The **Quantity** properties page is common to most elements. It contains information that helps identify the element as a material, such as the manufacturer and price. Some of the information on this page is used in the project estimate.

Sample Quantity Page

Manuf: The Manufacturer of the product.

Supplier: The company or store who will be supplying the product.

Price: The unit price of the product.

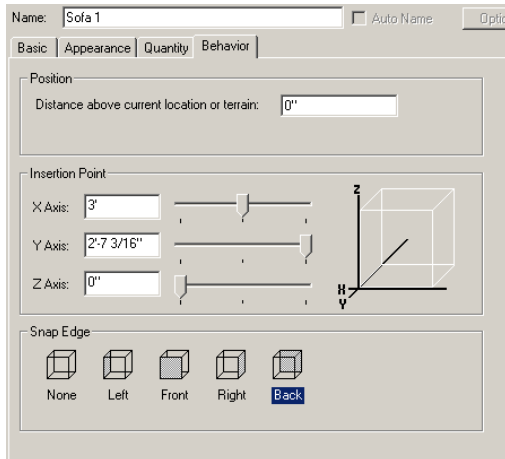
Division: A construction division identification. In North America, CSI divisions are used.

Part No.: Part Number. A series of numbers that identifies the product.

Alt Code: Alternate Code. An extra identification code that is used to link an element in the program's catalog to the databases of other applications, such as *Timberline*.

Behavior Page

The **Behavior** property page is available for symbol elements like furniture and lights.



Sample Behavior Page

Usually this page contains a **Distance above current location or terrain** option which lets you control the height at which the element is inserted relative to the terrain. The value entered is the distance from the terrain to the insertion point of the element. (For most elements, the insertion point is at the bottom of the element.)

Some elements have a defined **Insertion Point**, which is the point on the element that is attached to the cursor when you are inserting the element. Some elements also have a defined **Snap Edge**, which determines which edge of the element will snap to a wall if you position it near a wall.

To edit an element's insertion height:

1. Edit the value in the **Distance above current location or terrain** edit box.

To edit an element's insertion point:

1. Edit the values in the X Axis, Y Axis and Z Axis edit boxes, or use the sliders beside these edit boxes.

An X value moves the insertion point left or right. A Y value moves the insertion point

forwards or backwards. A Z value moves the insertion point up or down on the element.


To edit an element's snap edge:

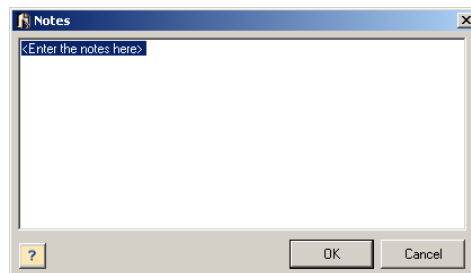
1. Click on the desired snap edge graphic in the *Snap Edge* area.

Adding Notes to an Element's Properties

The **Notes** function in the properties dialog lets you enter a note about the element. This additional information can be anything you want.

To add a note to an element's properties:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. Select the element to edit.
4. Select **Catalog > Element Properties**, or right-click and select **Properties**.
5. In the bottom left corner of the dialog, click the Add Notes button. 




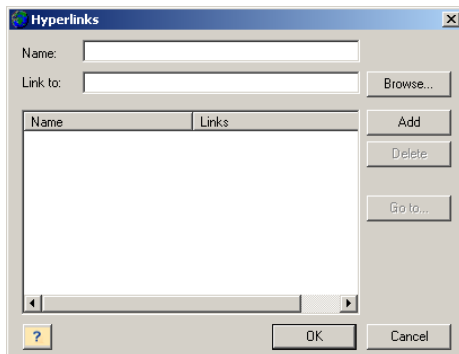
6. Enter your note in the **Notes** dialog.
7. Click **OK**.

Adding Hyperlinks to an Element's Properties

The **Hyperlinks** function in the properties dialog lets you create a link to an external file (e.g. *Word* document) or Web address.

To add a hyperlink to an element's properties:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. Select the element to edit.
4. Select **Catalog > Element Properties**, or right-click and select **Properties**.
5. In the bottom left corner of the dialog, click the Add Hyperlinks button. 



6. In the **Hyperlinks** dialog, specify a name for the hyperlink in the **Name** edit box (e.g. Broderbund Web Site).
7. In the **Link to** edit box, type the web address (e.g. <http://www.broderbund.com>) or path to the file you are linking to. If you are linking to a file, you can click **Browse** to search through the directories on your computer. Once you've located the file in the **Open** dialog, click **Open**. The path to the file is automatically displayed in the **Link to** edit box.
8. Click **Add** to add the link to the hyperlink window.

9. To view the link, select it in the hyperlink window, then click **Go to**.
10. To delete a hyperlink, select it in the hyperlink window, then click **Delete**.
11. Click **OK**.

Note: You can create a link to another

Broderbund[®] Home Design (*.bld) file. However, if that file uses the same catalog as the current drawing, you cannot access the catalog in the linked file.

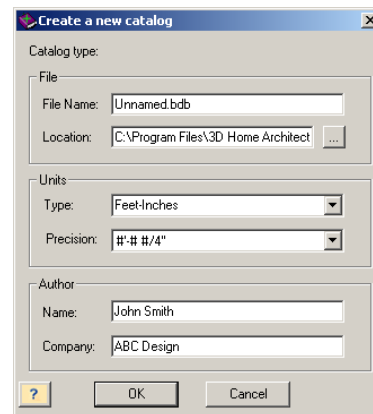
Creating a New Catalog

If you plan to edit or add elements in the Master Catalog, you may want to create a new catalog instead of editing the existing one. That way, the custom elements you create are distinguishable from the defaults and are stored in one place. When you create a new catalog, you specify a name and where you want to store the catalog.

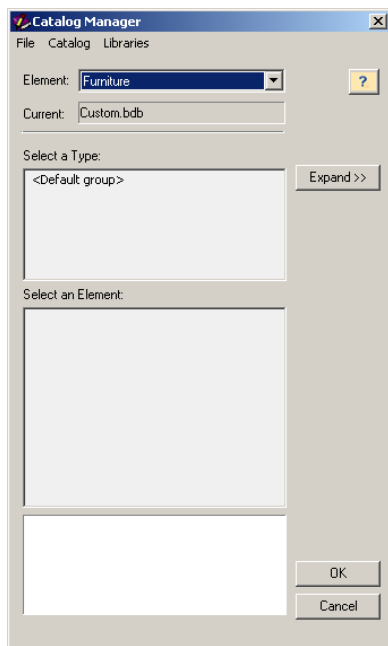
When you close the **Catalog Manager**, the new catalog will become the current catalog in the catalog panel.

To create a new catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the Catalog panel and select **Catalog Manager**.
2. Select **File > New Catalog**.



3. In the **Create a new catalog** dialog, type a name (without extension) in the **File Name** box.
4. Click the Browse button next to the **Location** edit box and select the directory where you want to store the new catalog. The default is the program's Catalogs directory, which is where you should store all catalogs.
5. From the **Type** drop box, select the unit of measure you would like to use for elements in the catalog.
6. From the **Precision** drop box, select the level of precision you would like to use for measurements. For example, selecting #'-##/16" sets the level of precision to 1/16th of an inch when working in feet and inches.
7. In the **Name** edit box, type your name.
8. In the **Company** edit box, type the name of your company, if applicable.
9. Click **OK**. A new, blank catalog is created.



10. Select **File > Save Catalog**.

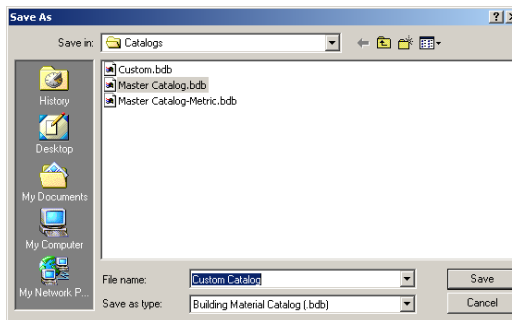
11. You can now add groups and elements to the catalog, or import elements from another catalog (see *Importing Elements into Catalogs* on page 232). Remember to save the catalog after you make changes to it.

Creating a Copy of a Catalog

You can save a catalog under a different name, which essentially creates a copy of it.

To create a copy of a catalog under a different name:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Make sure the catalog you want to save is the current catalog.
3. Select **File > Save Catalog As**.



4. In the **File name** edit box, type the name you want to save under (without extension).
5. Click **Save**.

Note: The newly saved catalog becomes the current catalog.

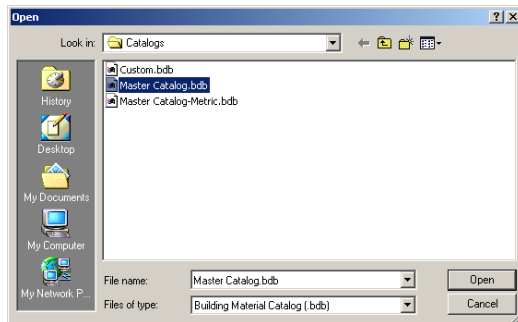
Importing Elements into Catalogs

Using the Catalog Manager you can import elements from another catalog into the current catalog. This feature is often used when you are creating new catalogs.

Note: If you want to import a 3D Studio file, see *Importing 3D Studio Files* on page 224.

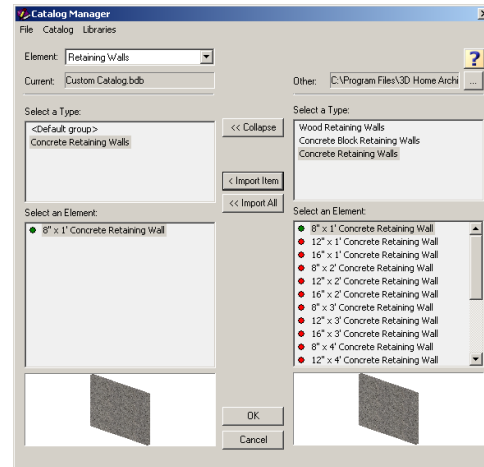
To import elements into a catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Make sure the catalog you want to import elements into is the currently open catalog.
3. From the **Element** drop box, select the appropriate element type.
4. Click **Expand** to expand the Catalog Manager dialog.
5. On the right side of the dialog, click the Browse button, then select the catalog you want to import elements from.



6. In the right-hand window, select an element to import, then click **Import Item**. If you want to import all elements listed, just click **Import All**. The element is imported into the current catalog. Note that the group that the element

belongs to is also imported into the current catalog.



7. When you are done importing elements, click **Collapse** to return to the regular view in the **Catalog Manager**.
8. Select **File > Save Catalog**.

Deleting Elements from a Catalog

You can delete any element from a catalog.

To delete an element from a catalog:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select the appropriate element type from the **Element** drop box.
3. Select the element you want to delete.
4. Select **Catalog > Delete Element**, or right-click and select **Delete Element**.
5. Select **File > Save Catalog**.

Opening a Catalog

You can use the Open Catalog tool to open any catalog and make it the current catalog in the catalog panel. The Open Catalog tool is also available in the Catalog Manager.

To open a catalog for display in the Catalog panel:

1. Select **File > Catalogs > Open Catalog**.
2. In the **Open** dialog, locate the catalog you want to open.
3. Click **Open**. The catalog you opened becomes the active catalog. Note that when you open a catalog, only one element type is displayed. The type displayed depends on the last Insert tool selected.

To open a catalog in the Catalog Manager:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. Select **File > Open Catalog**.
3. In the **Open** dialog, locate the catalog you want to open.
4. Click **Open**. The catalog you opened becomes the active catalog in the Catalog Manager.
5. Click **OK**. The catalog is now the current catalog in the catalog panel.

Closing a Catalog

You can use the Close Catalog tool to close the current catalog in the catalog panel or the **Catalog Manager** dialog. Note that this leaves the catalog window blank until you open another catalog.

To close the catalog in the catalog panel:

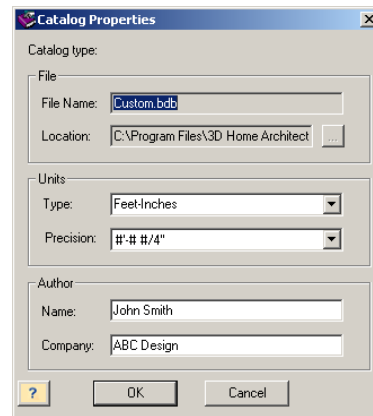
1. Select **File > Catalogs > Close Catalog**.

To close a catalog in the Catalog Manager:

1. Select **File > Close Catalog**.

Viewing Catalog Properties

You can view the properties of the current catalog (file name, location, etc.) using the Catalog Properties tool.



To view the properties of the catalog currently in the catalog panel:

1. Select **File > Catalogs > Catalog Properties**.

To view catalog properties within the catalog Manager:

1. Select **File > Catalog Properties**.

Chapter 36

Materials, Colors & Patterns

Every element has a material assigned to it in the element's property pages. Materials determine what textures, colors and patterns are used to display elements in 3D view. You can edit and create materials on the fly.

All materials are stored in a materials library, called *materials.mlb*. You can create new material libraries containing a specific selection of materials, and load those custom libraries in other projects.

This chapter tells you how to customize materials and work with material libraries.

If you want to edit the material, color or pattern of an inserted element, see *Changing an Element's Material or Color* on page 148.

Things You Should Know About Editing Materials

When you add or edit a material through the Catalog Manager, the custom material is saved with the catalog, and is only available when editing elements in the catalog. If you add or edit a material when editing an element that has been inserted in your drawing, however, the customized material is only available in the current project when editing the properties of inserted elements. The materials library in the catalog remains unchanged. This is because the materials library in the catalog is separate from the materials library in the current drawing.

The reason that there is a project-specific materials library is so that any materials used in your project are always saved with the project, making it possible to share your project with others and always maintain your customized materials.

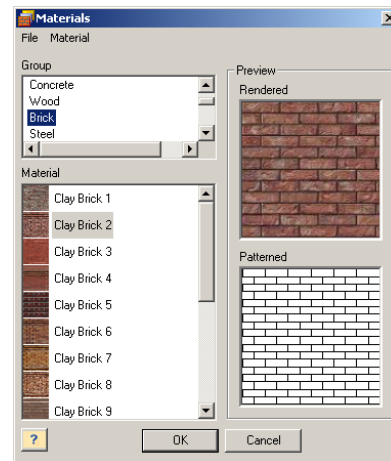
If you want materials that you have customized in your catalog to be available in your project-specific materials library, or vice versa, you can use the Transfer tool to save the custom materials to the external materials library file (*materials.mlb*), then import the custom materials from the library file into the other materials library.

Customizing the Materials Library

The materials library contains a vast array of materials that you can apply to elements. Even so, you may find that you want to customize it at some point in time.

In the materials library, materials are listed in groups (Concrete, Brick, Wood, etc.) so you can organize and find them easily. You can add, rename and delete groups as needed.

You can add new materials to the library, as well as edit and delete existing materials.



If you customize the catalog materials library (through the Catalog Manager), your change is saved with the catalog.

If you customize the project-specific materials library (by editing an inserted element), your change is saved in the current project only.

To access the catalog materials library:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. In the **Catalog Manager**, select **Libraries > Materials**. The **Materials** dialog appears.

To access the project-specific materials library:

1. Select an element in your drawing.
2. Right-click and select **Properties**.
3. In the properties dialog, select the Appearance tab.
4. Click the **Select** button. The **Materials** dialog appears.

To add a group to the materials library:

1. Select **Material > Add Group**, or right-click in the *Group* window and select **Add Group**.

2. Type a name for the group, then press ENTER.

To rename a group in the materials library:

1. Select the group in the *Group* window.
2. Select **Material > Rename Group**, or right-click and select **Rename Group**.
3. Type the new name, then press ENTER.

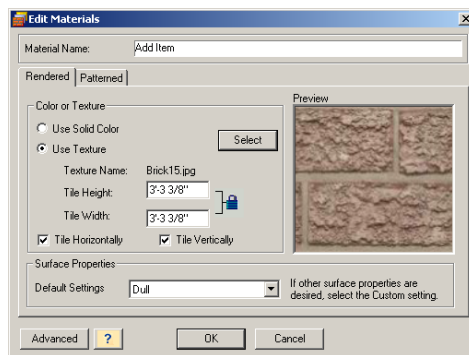
To delete a group from the materials library:

1. Select the group in the *Group* window.
2. Select **Material > Delete Group**, or right-click and select **Delete Group**.

Note: A group cannot be deleted if it contains materials.

To add a new material to the materials library:

1. In the *Group* window, select or create the group you want to add the material to.
2. Select **Material > Add Material**, or right-click in the *Material* window and select **Add Material**.



3. In the **Material Name** edit box, type a name for the new material.
4. Specify the material properties. See *Editing Material Properties* on page 237.
5. Click **OK**. The material is added to the library.

To edit a material in the materials library:

1. Select the material in the *Material* window.

2. Select **Material > Edit Material**, or right-click and select **Edit Material**.
3. Edit the material properties in the **Edit Materials** dialog. See *Editing Material Properties* on page 237.
4. Click **OK**.

To delete a material from the materials library:

1. Select the material in the *Material* window.
2. Select **Material > Delete Material**, or right-click and select **Delete Material**.

To save changes to the catalog materials library:

1. Once you've made your changes in the **Materials** dialog, click **OK**.
2. In the **Catalog Manager**, select **File > Save Catalog**.

Editing Material Properties

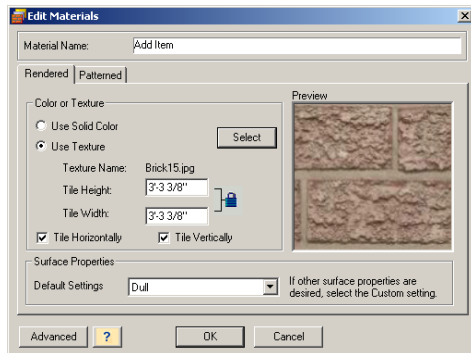
When you are adding or editing a material in the materials library, you need to specify the material's properties. A material has two main types of properties: *Rendered* and *Patterned*. Rendered properties determine what texture or color is used to display an element in the Rendered or Rendered Outline display mode. Patterned properties determine what pattern is used to display an element in Patterned mode.

To edit the properties of a material:

1. Select the material to edit in the materials list.
2. Select **Material > Edit Material**, or click one of the preview swatches.

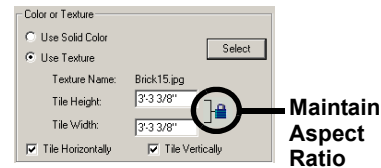
To edit Rendered properties:

1. In the **Edit Materials** dialog, select the Rendered tab.



2. If you want to display an element in a solid color in 3D rendered or rendered outline view, enable the **Use Solid Color** radio button. Click the **Select** button, then select the color you want to use in the **Color** dialog.
3. If you want to display an element with a texture applied to it in 3D rendered or rendered outline view, enable the **Use Texture** radio button. Click the **Select** button, then select the texture you want to use. A wide selection of textures can be found in the program's Textures directory. You can use BMP, JPG, TGA and PNG files. If you want to use textures from outside sources, see *Using Textures from Outside Sources* on page 239 for guidelines.
4. If you want to change the scale of the texture, enter new values in the **Tile Height** and **Tile Width** edit boxes. Tile height refers to the height of one bitmap tile. The program uses tiled rendering to display images, meaning images are generated in pieces (tiles) vertically and horizontally. Changing the tile height of a brick material, for example, would make the bricks look taller. Changing the tile width would make the bricks look wider.
5. By default, the Tile Height and Tile Width have the Maintain Aspect Ratio lock closed. When the lock is closed, the Tile Width changes to match the Tile Height, and vice

versa. This prevents distortion. If you want to specify different values for each, you need to open the Maintain Aspect Ratio lock by clicking on it.



6. To repeat the bitmap tile horizontally, enable the **Tile Horizontally** check box.
7. To repeat the bitmap tile vertically, enable the **Tile Vertically** check box.
8. To change the surface finish of the material (dull, shiny, etc.), make a selection from the drop box in the *Surface Properties* area. This setting will take effect when you create a 3D TrueView. If you want to specify a custom surface finish, select *Custom* in the list, then click the **Advanced** button.
9. If creating a custom finish, specify its properties. These are described below.

Specular. Reflection that creates highlights on materials, making them appear shiny.

Emissive. The amount of light given off by a material. The more emissive a material is, the more self-luminous it appears.

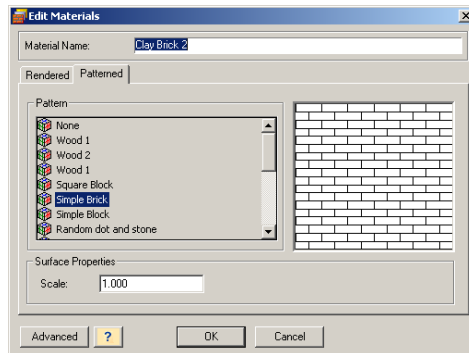
Transparency. The degree to which a material is pervious to light.

Color Bleed. The degree to which different colors blend where they meet.

To return to the basic view, click the **Basic** button at the bottom of the dialog.

To edit Patterned properties:

1. In the **Edit Materials** dialog, select the Patterned tab.



2. To select a different pattern to use in 3D patterned views, select the pattern in the *Pattern* list.
3. To edit the scale of the pattern, edit the value in the **Scale** edit box. A value of 2 doubles the original scale, while a value of .5 halves the original scale.
4. To specify more options, click the **Advanced** button. To edit a pattern, see *Customizing the Patterns Library* on page 241.

Using Textures from Outside Sources

When changing a material's texture assignment, you can use textures from outside sources provided they are appropriately sized and not too large. As a rule, the texture's dimensions should be a multiple of 2:

2, 4, 8, 16, 32, 64, 128, 256, 512, 1024, etc.

If the dimensions are not multiples of 2, the texture will be cropped (from the top and right side) to the next smallest size. For some textures, this will make it look like the texture is cut off.

For example, if your texture is 500 x 500, it will be cropped down to 256 x 256, since 500 is not a multiple of 2. If the texture were 512 x 512, however, it would not be cropped.

Cropping is not that important if the texture is a grid pattern (such as brick), since such a texture is

uniform throughout. However, cropping can have an undesirable result if the texture is something like a tree.

Saving Customized Materials to a Materials Library File

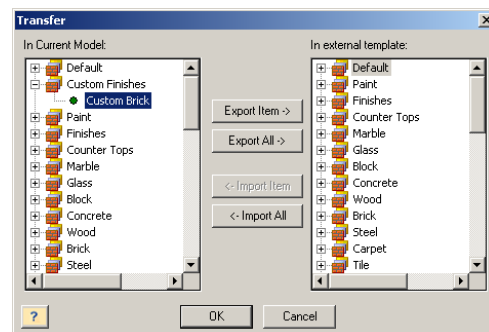
If you have added or edited materials in either the catalog materials library or project-specific materials library, you can save the custom materials to the external materials library file (*materials.mlb*). You can then import the customized materials from the library file into any materials library, whether that be the catalog materials library or project-specific materials library. The library file basically acts like a shuttle between libraries.

You can save materials to the default materials library, or create a new library to save them in.

To save customized materials to a materials library file:

1. In the **Materials** dialog, select **File > Transfer**.
2. In the **Open** dialog, select the library you want to export materials to, then click **Open**. The main materials library is called *materials.mlb*.

Tip: You can create a new library file if you want by entering a name in the **File name** edit box.



3. In the left pane, select the customized material, then click **Export Item**. The material (and the group it is under) is added to the materials library file. If you wanted

you could also click **Export All** to instantly export the entire materials list to the library file.

4. Click **OK**.

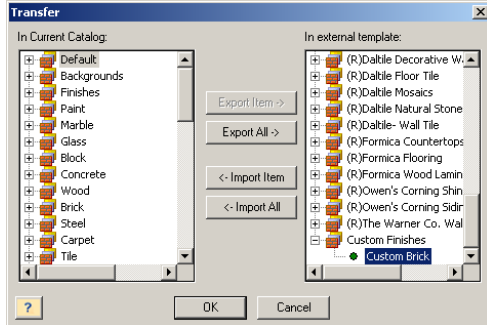
If you want to import the customized materials into your catalog materials library or project-specific materials library, see the next topic, *Importing Materials from a Materials Library File*.

Importing Materials from a Materials Library File

If you have saved customized materials to the materials library file, you can import the materials into your catalog materials library or any project-specific materials library.

To import materials from a library file:

1. In the **Materials** dialog, select **File > Transfer**.
2. In the **Open** dialog, select the materials library (e.g. *materials.mlb*) that you want to import materials from, then click **Open**.



3. In the right pane, select the material to import, then click **Import Item**. Or, just click **Import All** to import the entire list.
4. Click **OK**.

Specifying the Location of the Textures Directory

By default, textures are located in the program's Textures directory. If you move your textures directory to another location on your system, or would like to link to another Textures directory (such as one from an older version of the program), you will need to specify the location of the Textures directory so that textures appear properly in the program.

To specify the location of your Textures directory:

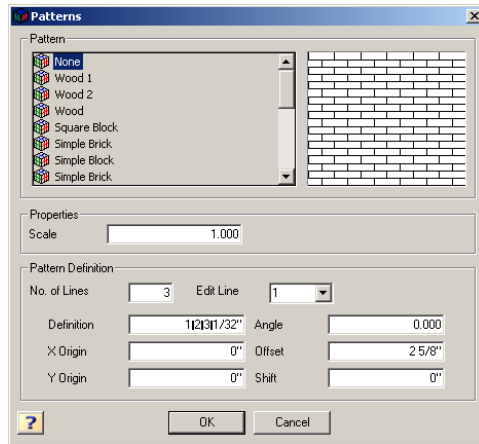
1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the **General** tab.
3. In the *File Paths* area, click on the **Textures Directory** to select it.
4. Click **Modify**.
5. In the **Browse For Folder** dialog, locate the folder containing your textures, then click **OK**.
6. Click **OK** in the **Program Settings** dialog.

Note: If you set your path to the Textures directory of an older *3D Home Design* program, the catalog in version 6 will have no textures in it until you switch the path back to the Textures directory of version 6. To alleviate this problem you can copy your old textures into your new Textures directory and leave the path set to the new Textures directory. You will then be able to open drawings from an older version and have all your textures applied, as well as leave the textures in the catalog intact.

Customizing the Patterns Library

The patterns library contains an excellent selection of pre-defined patterns that you can apply to materials.

You can edit patterns to suit your needs.



To access the patterns library:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. In the **Catalog Manager**, select **Libraries > Patterns**. The **Patterns** dialog appears.

Note: You can also access the patterns library when editing the Patterned properties of a material, by clicking the pattern swatch in the **Edit Materials** dialog.

To edit a pattern:

1. Select the pattern in the list.
2. To edit the scale of a pattern, enter a value in the **Scale** edit box. A value of 2 doubles the original scale, while a value of .5 halves the original scale.
3. To edit the pattern's line definition, click the **Advanced** button at the bottom of the dialog. A number of properties pop up that let you define the pattern.

No. of Lines. The number of lines that will repeat in the pattern. Usually, this will be 1 or 2, but it could be more depending on the complexity of the pattern.

Edit Line. The line you are currently editing.

Definition. Generally, the segment lengths and spaces in the line's pattern.

A single value (other than 0) creates a solid line. (See Example 2 on page 241.)

For dashed patterns, segments and spaces can be different lengths, but spaces must be preceded by a negative sign to indicate they are spaces.

For example, a definition of 20,-5,10,-5 (in Metric) creates the following pattern: 20 mm dash, 5 mm space, 10 mm dash, 5 mm space. (See Example 1 on page 241.)

X Origin. The point on the X axis the line passes through.

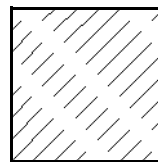
Y Origin. The point on the Y axis the line passes through.

Angle. The angle of the line in degrees.

Offset. The spacing between lines as the line is repeated (offset) parallel to the original throughout the pattern.

Shift. The distance each offset line is shifted (left or right) from the origin of the previous line. This creates a staggered effect. (See Example 3 on page 242.)

Example 1 (single line pattern)



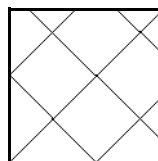
No. of Lines: 1

Line Definition: 20,-5,10,-5

Angle: 45°

Offset: 5

Example 2 (multi-line pattern)



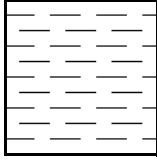
No. of Lines: 2

Line Definition: 1.00 (both lines)

Angle: 45° (line 1) and 135° (line 2)

Offset: 20 (both lines)

Example 3 (pattern with a shift)



No. of Lines: 1

Line Definition: 10,-5

Angle: 0°

Offset: 5

Shift: 5

Chapter 37

Line Styles

A line style defines the type and color of a line. Line styles are applied to electrical wiring and dimension styles.

You can customize the line styles and linetype libraries to suit your needs.

To change the dimension style of an inserted dimension, see *Changing the Style of a Dimension* on page 165.

Things You Should Know About Editing Line Styles

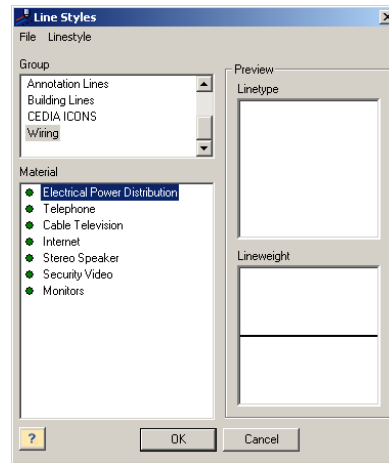
Line styles are used by electrical wiring and dimension styles. When you add or edit a line style through the Catalog Manager, the custom line style is saved with the catalog, and is only available when editing dimension styles in the catalog. If you add or edit a line style when editing electrical wiring or the style of a dimension in your drawing, however, the customized line style is only available in the current project when editing the properties of inserted wiring or dimensions. The line styles library in the catalog remains unchanged. This is because the line styles library in the catalog is separate from the line styles library in the current project.

The reason that there is a project-specific line styles library is so that any line styles used in your project are always saved with the project, making it possible to share your project with others and always maintain your customized line styles.

If you want line styles that you have customized in your catalog to be available in your project-specific line styles library, or vice versa, you can use the Transfer tool to save the custom line styles to the external line styles library file (*linstyles.klb*), then import the custom line styles from the library file into the other line styles library.

Customizing the Line Styles Library

The line styles library contains a wide selection of line styles that you can apply to electrical wiring and dimension styles. You may find that you want to customize the library at some point in time.



In the line styles library, line styles are listed in groups so you can organize and find them easily. The Wiring group contains an assortment of wiring styles. You can add, rename and delete groups as needed.

You can add new line styles to the library, as well as edit and delete existing line styles.

When you edit the line styles library in your catalog, the line styles are saved with your catalog. If you edit line styles while editing your drawing, the line styles are saved in the current drawing only.

To access the line styles library in the Catalog Manager:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. In the **Catalog Manager**, select **Libraries > Line Styles**. The **Line Styles** dialog appears.

To access the line styles library through inserted electrical wiring:

1. Select the wiring in your drawing.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**. The **Line Styles** dialog appears. This is your project-specific line styles library.

To access the line styles library by editing a dimension style:

1. Select **Settings > Dimension Styles**. Or, select a dimension in your drawing, then right-click and select **Properties**.
2. In the **Dimension Styles** dialog, click **Edit**.
3. In the **Edit Dimension Styles** dialog, select the **Line Styles** tab. This is your project-specific line styles library.

To add a group to the line styles library:

1. Select **Linestyle > Add Group**, or right-click in the *Group* window and select **Add Group**.
2. Type a name for the group, then press ENTER.

To rename a group in the line styles library:

1. Select the group in the *Group* window.
2. Select **Linestyle > Rename Group**, or right-click and select **Rename Group**.
3. Type the new name, then press ENTER.

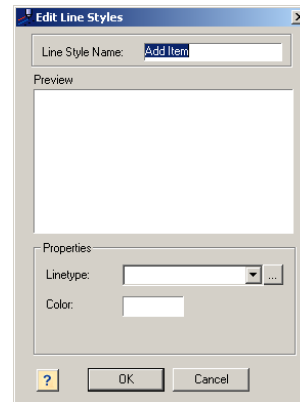
To delete a group from the line styles library:

1. Select the group in the *Group* window.
2. Select **Linestyle > Delete Group**, or right-click and select **Delete Group**.

Note: A group cannot be deleted if it contains line styles.

To add a new line style to the line styles library:

1. In the *Group* window, select or create the group you want to add the line style to.
2. Select **Linestyle > Add Linestyle**, or right-click in the *Material* window and select **Add Linestyle**.

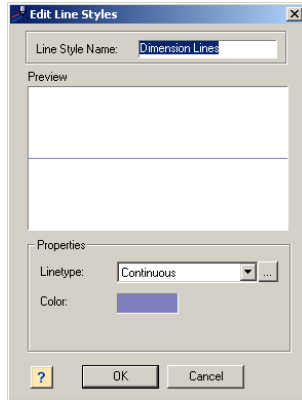


3. In the **Line Style Name** edit box, type a name for the new line style.
4. To select a linetype for the line style, click the Browse button next to the **Linetype** edit box. Select a linetype from the **Linetypes** dialog. If you want to add or edit a linetype, see *Customizing the Linetypes Library* on page 247.
5. To select a color for the line, click the **Color** box in the **Edit Line Styles** dialog, then select the color you want from the **Color** dialog.
6. Click **OK**. The line style is added to the library.

To edit a line style in the line styles library:

1. Select the line style in the *Material* window.

2. Select **Linestyle > Edit Linestyle**, or right-click and select **Edit Linestyle**.



3. In the **Edit Line Styles** dialog, select the desired linetype and color.
4. Click **OK**.

To delete a line style from the line styles library:

1. Select the line style in the *Material* window.
2. Select **Linestyle > Delete Linestyle**, or right-click and select **Delete Linestyle**.

To save changes to the line styles library in the catalog:

1. Once you've made your changes in the **Line Styles** dialog, click **OK**.
2. In the **Catalog Manager**, select **File > Save Catalog**.

Saving Line Styles to a Line Styles Library File

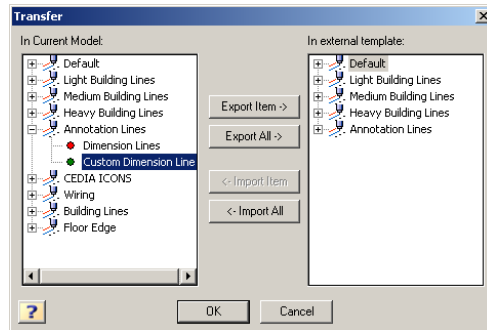
If you have added or edited line styles in either the catalog line styles library or project-specific line styles library, you can save the custom line styles to the external line styles library file (*linestyles.klb*). You can then import the customized line styles from the library file into any line styles library, whether that be the catalog line styles library or project-specific line styles library. The library file basically acts like a shuttle between libraries.

You can save line styles to the default line styles library, or create a new library to save them in.

To save customized line styles to the line styles library file:

1. In the **Line Styles** dialog, select **File > Transfer**.
2. In the **Open** dialog, select the *linestyles.klb* file (or whatever file you want to save to), then click **Open**.

Tip: You can create a new library file if you want by entering a name in the **File name** edit box.



3. In the left pane of the **Transfer** dialog, select the line style you want to save, then click **Export Item**. To export the entire list, just click **Export All**. The library file is updated.
4. Click **OK**.

If you want to import the custom line styles into your catalog line styles library or the project-specific line styles library, see the next topic, *Importing Line Styles from a Line Styles Library File*.

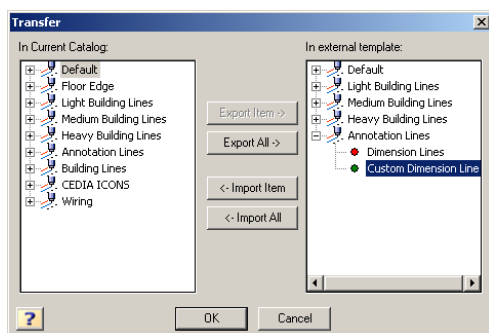
Importing Line Styles from a Line Styles Library File

If you have saved customized line styles to the line styles library file, you can import the line styles into your catalog line styles library or any project-specific line styles library.

To import line styles from a line styles library file:

1. In the **Line Styles** dialog, select **File > Transfer**.

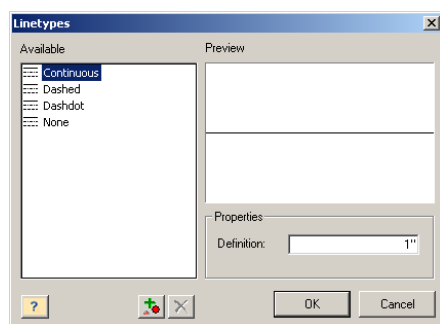
- In the **Open** dialog, select the *linetypes.klb* file (or whatever file you want to import line styles from), then click **Open**.



- In the right pane of the **Transfer** dialog, select the custom line style you want to import, then click **Import Item**. Or, to import the entire list, just click **Import All**. The list in the left pane is updated.
- Click **OK**.

Customizing the Linetypes Library

The linetypes library contains a list of pre-defined linetypes that you can apply to line styles. You may want to add or edit linetypes to suit your needs.



To access the linetypes library:


- Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
- In the **Catalog Manager**, select **Libraries > Linetypes**. The **Linetypes** dialog appears.

Note: You can also access the linetypes library when editing a line style, by clicking one of the swatches, then clicking the Browse button in the **Edit Line Styles** dialog. If you do access the linetypes library this way, new or edited linetypes will be saved with the line style in the current drawing only. The line styles and linetypes libraries in the catalog will remain unchanged.


To edit a linetype:

- Select the linetype in the list.
- In the **Definition** edit box, edit the linetype's definition. Lines are defined by a series of distances separated by commas. Each number represents the length of either a line segment or space. Positive numbers create a line segment of the specified length. Negative numbers create a space of the specified length. For example, a dashed line may have a definition like 1/4", -1/4".
- Once you've edited the linetype, click **OK**.

To add a linetype to the list:

- Click the Add Item button below the linetypes list, or right-click in the left pane and select **Add Item**. A new entry is added to the list. 
- Type a name for the linetype and press ENTER.
- In the **Definition** edit box, specify the linetype's definition.
- Once you've defined the linetype, click **OK**.

To delete a linetype from the list:

- Select the linetype in the list.
- Right-click and select **Delete**, or click the Delete button below the linetypes list. 

Note: You cannot delete the existing, pre-defined linetypes because they are being used.

To save changes to the linetypes library in the catalog:

- Once you've made your changes in the **Linetypes** dialog, click **OK**.

2. In the **Catalog Manager**, select **File > Save Catalog**.

Chapter 38

Text & Dimension Styles

When you insert text or dimensions in your drawing, they are always based on a style that determines how they look.

Text and dimension styles are stored in libraries. You can edit and create text and dimension styles to suit your needs.

If you want to change the style of text that you have inserted in your drawing, see *Changing the Style of Text* on page 161. If you want to change the style of a dimension in your drawing, see *Changing the Style of a Dimension* on page 165.

Things You Should Know About Editing Text Styles

When you add or edit a text style through the Catalog Manager, the custom text style is saved with the catalog, and is only available when editing text styles in the catalog. If you add or edit a text style when editing text in your drawing (or an element that uses text), however, the customized text style is only available in the current project when editing text styles in your drawing. The text styles library in the catalog remains unchanged. This is because the text styles library in the catalog is separate from the text styles library in the current project.

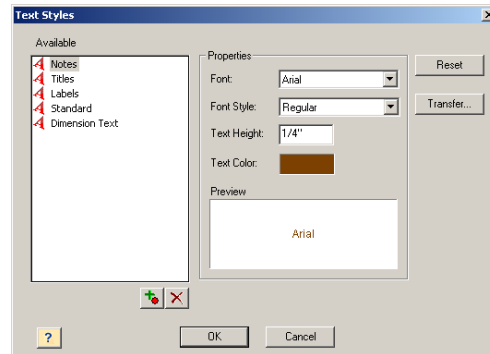
The reason that there is a project-specific text styles library is so that any text styles used in your project are always saved with the project, making it possible to share your project with others and always maintain your customized text styles.

If you want text styles that you have customized in your catalog to be available in your project-specific text styles library, or vice versa, you can use the Transfer tool to save the custom text styles to the external text styles library file (*Textstyles.tsl*), then import the custom text styles from the library file into the other text styles library.

Tip: You can save text styles in your template drawing by opening the template drawing, then selecting **Settings > Text Styles** and creating your custom text style in the **Text Styles** dialog. The custom text styles will then be available in the project-specific text styles libraries of future projects that you base on the template drawing.

Customizing the Text Styles Library

The text styles library contains a number of pre-defined text styles that you can apply to text. You can edit the existing text styles, or create your own.



When you edit the text styles library in your catalog, the text styles are saved with your catalog. If you edit text styles while editing inserted text, or an element that uses text, the text styles are saved in the current drawing only.

To access the text styles library in the Catalog Manager:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. In the **Catalog Manager**, select **Libraries > Text Styles**. The **Text Styles** dialog appears.


To access the text styles library through inserted text:

1. Select the text in your drawing.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Text** dialog, click the **Text Style** button. The **Text Styles** dialog appears. This is your project-specific text styles library.

To access the text styles library through the Settings menu:

1. Select **Settings > Text Styles**. This is your project-specific text styles library.

To add a text style to the library:

1. Right-click in the text style window and select **Add Item**. Or, click the Add Item button below the text style window. A new entry is added to the list. 
2. Type a name for the text style and press ENTER.
3. In the *Properties* area, define the text style.

Font. A set of text characters in a specific style and size.

Font Style. The style of text. Choices can include Regular, Italic, Bold, and Bold Italic.

Text Height. The size of text.

Text Color. The color of text. Click the swatch to access the **Color** dialog and select a color.
4. Click **OK**.

To edit a text style in the library:

1. Select the text style in the list.
2. Edit the properties in the *Properties* area.

Font. A set of text characters in a specific style and size.


Font Style. The style of text. Choices can include Regular, Italic, Bold, and Bold Italic.

Text Height. The size of text.

Text Color. The color of text. Click the swatch to access the **Color** dialog and select a color.
3. Click **OK**.

Note: Clicking **Reset** will return a text style to the following default values: Arial, Regular, 4", Black.

To delete a text style from the library:

1. Select the text style in the list.
2. Right-click and select **Delete**, or click the Delete button below the text styles window. 

To save changes to the text styles library in the catalog:

1. Once you've made your changes in the **Text Styles** dialog, click **OK**.

2. In the **Catalog Manager**, select **File > Save Catalog**.

Saving Customized Text Styles to the Text Styles Library File

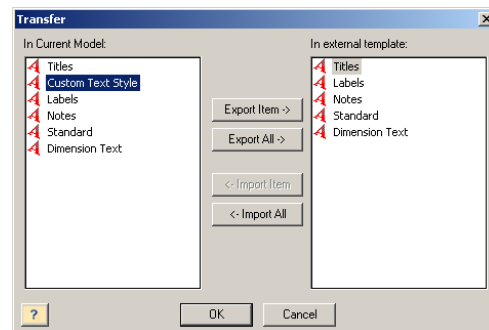
If you have added or edited text styles in either the catalog text styles library or project-specific text styles library, you can save the custom text styles to the external text styles library file (*Textstyles.tsl*). You can then import the customized text styles from the library file into any text styles library, whether that be the catalog text styles library or project-specific text styles library. The library file basically acts like a shuttle between libraries.

You can save text styles to the default text styles library file, or create a new library to save them in.

To save customized text styles to the text styles library file:

1. In the **Text Styles** dialog, click the **Transfer** button.
2. In the **Open** dialog, select the *Textstyles.tsl* file (or whatever file you want to save to), then click **Open**.

Tip: You can create a new library file if you want by entering a name in the **File name** edit box.



3. In the left pane of the **Transfer** dialog, select the text style you want to save, then click **Export Item**. To export the entire list, just click **Export All**. The library file is updated.
4. Click **OK**.

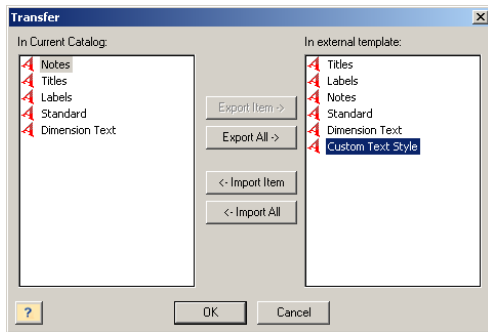
If you want to import the custom text styles into your catalog text styles library or the current drawing, see the next topic, *Importing Text Styles from a Text Styles Library File*.

Importing Text Styles from a Text Styles Library File

If you have saved customized text styles to the text styles library file, you can import the text styles into your catalog text styles library or any project-specific text styles library.

To import text styles from a text styles library file:

1. In the **Text Styles** dialog, click **Transfer**.
2. In the **Open** dialog, select the *Textstyles.tsl* file (or whatever file you want to import text styles from), then click **Open**.



3. In the right pane of the **Transfer** dialog, select the custom text style you want to import, then click **Import Item**. Or, to import the entire list, just click **Import All**. The list in the left pane is updated.
4. Click **OK**.

Things You Should Know About Editing Dimension Styles

When you add or edit a dimension style through the Catalog Manager, the custom dimension style is saved with the catalog, and is only available when editing dimension styles in the catalog. If you add or edit a dimension style when editing dimensions in your drawing, however, the customized dimension style is only available in the current project when editing dimension styles

in your drawing. The dimension styles library in the catalog remains unchanged. This is because the dimension styles library in the catalog is separate from the dimension styles library in the current project.

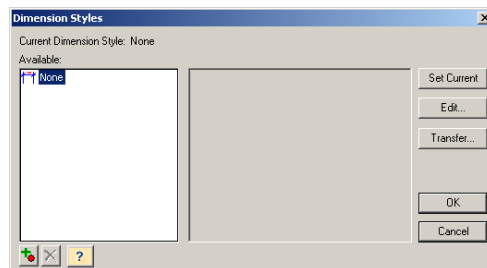
The reason that there is a project-specific dimension styles library is so that any dimension styles used in your project are always saved with the project, making it possible to share your project with others and always maintain your customized dimension styles.

If you want dimension styles that you have customized in your catalog to be available in your project-specific dimension styles library, or vice versa, you can use the Transfer tool to save the custom dimension styles to the external dimension styles library file (*Dimstyles.dlb*), then import the custom dimension styles from the library file into the other dimension styles library.

Tip: You can save dimension styles in your template drawing by opening the template drawing, then selecting **Settings > Dimension Styles** and creating your custom dimension style in the **Dimension Styles** dialog. The custom dimension styles will then be available in the project-specific dimension styles libraries of future projects that you base on the template drawing.

Customizing the Dimension Styles Library

The dimension styles library contains one predefined dimension style called *Standard*. This is the default dimension style used when you insert dimensions in your drawing. You can add and edit dimension styles to suit your needs.



When you edit the dimension styles library in your catalog, the dimension styles are saved with your catalog. If you edit dimension styles while editing inserted dimensions, the dimension styles are saved in the current drawing only.

To access the dimension styles library in the Catalog Manager:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. In the **Catalog Manager**, select **Libraries > Dimension Styles**. The **Dimension Styles** dialog appears.


To access the dimension styles library through inserted dimensions:

1. Select the dimension in your drawing.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**. The **Dimension Styles** dialog appears. This is your project-specific dimension styles library.

To access the dimension styles library through the Settings menu:

1. Select **Settings > Dimension Styles**. This is your project-specific dimension styles library.

To add a new dimension style to the list:


1. Right-click in the dimension style window and select **Add Item**. Or, click the Add Item button below the dimension style window. A new entry is added to the list. 
2. Type a name for the dimension style and press ENTER.
3. Click the **Edit** button, then define the dimension style. See *Dimension Style Properties* on page 253.
4. Click **OK**.

To edit a dimension style:

1. Select the dimension style in the list.
2. Click **Edit**.

3. Define the dimension in the **Edit Dimension Styles** dialog. See *Dimension Style Properties* on page 253.
4. Click **OK**.

To delete a dimension style from the library:

1. Select the dimension style in the list.
2. Right-click and select **Delete**, or click the Delete button below the dimension styles window. 

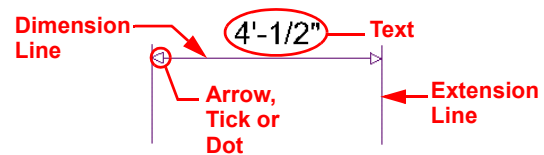
To save changes to the dimension styles library in the catalog:

1. Once you've made your changes in the **Dimension Styles** dialog, click **OK**.
2. In the **Catalog Manager**, select **File > Save Catalog**.

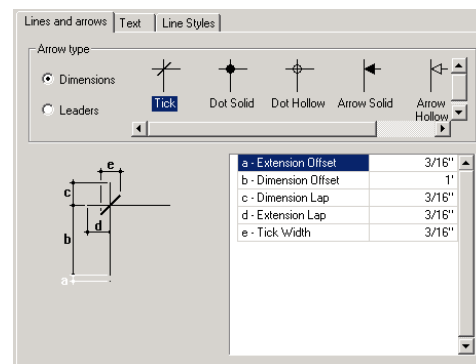
Dimension Style Properties

You can control a dimension's line, arrow and text style properties.

Anatomy of a Dimension



Lines and Arrows

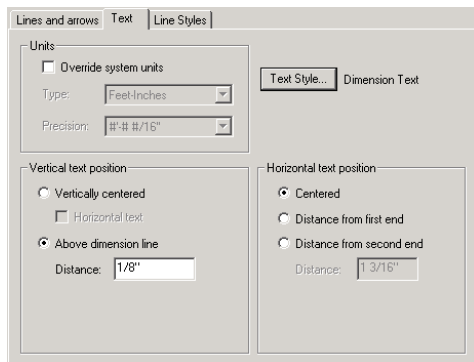


Arrow Type

You can specify an arrow type for dimensions and leaders (leaders are used with the Text with Leader tool). Choose an arrow, dot or tick for your arrow type.

The properties below the *Arrow Type* selection window (Extension Offset, Dimension Offset, etc.) vary depending on the arrow type selected. As you make different selections, the dimension updates in the preview window.

Dimension Text



Units

The units (e.g. feet and inches) and precision used to display the dimension value.

Override system units: Uses the unit of measure specified in the **Edit Dimension Styles** dialog instead of the unit of measure specified in the program settings.

Type: Choose from Feet-Inches, Millimeters, Centimeters, Meters or Inches.

Precision: For Feet-Inches, the choices are whole units (0, 1/2, 1/4 and so on). For metric units, the choices are number of decimal places you can use.

Text Style

Refers to the font, font style, text height and color of the dimension text. Click **Text Style** to select a style.

Vertical Text Position

This is the vertical position of the dimension text relative to the dimension line.

Vertically Centered: Text is placed inside the dimension line.

Horizontal Text: Forces the dimension text to always be horizontal, regardless of the dimension line's angle.

Above Dimension Line: Text is placed above the dimension line.

Distance: Distance between the text and the dimension line when placing text above the dimension line.

Horizontal Text Position

This is the position of the dimension text relative to the ends of the dimension line.

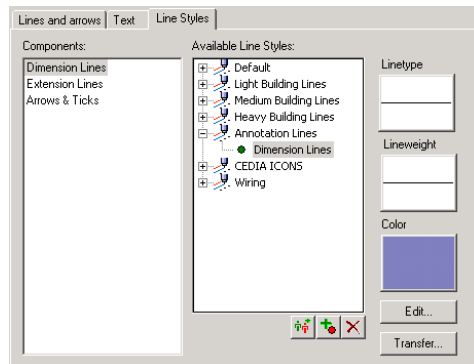
Centered: Centers the text inside the dimension line.

Distance from first end: Places the text a specific distance from the first end of the dimension. Specify the distance in the Distance edit box.

Distance from the second end: Places the text a specific distance from the second end of the dimension. Specify the distance in the Distance edit box.

Line Styles

You can select a different line style for the dimension line, extension lines and arrows. A line style determines the linetype and color.



To assign a different line style to a dimension component, select the component in the left pane, then select the desired line style in the right pane.

For information about creating custom line styles, see the Line Styles chapter on page 243.

Saving Customized Dimension Styles to the Dimension Styles Library File

If you have added or edited dimension styles in either the catalog dimension styles library or project-specific dimension styles library, you can save the custom dimension styles to the external dimension styles library file (*Dimstyles.dlb*). You can then import the customized dimension styles from the library file into any dimension styles library, whether that be the catalog dimension styles library or project-specific dimension styles library. The library file basically acts like a shuttle between libraries.

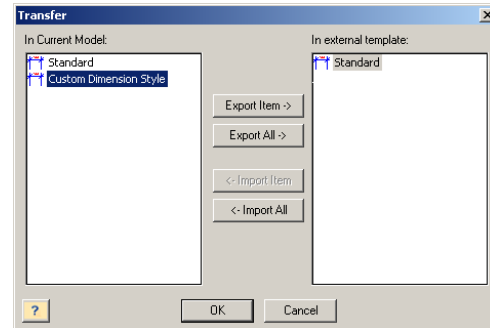
You can save dimension styles to the default dimension styles library file, or create a new library to save them in.

To save dimension styles to the dimension styles library file:

1. In the **Dimension Styles** dialog, click the **Transfer** button.

2. In the **Open** dialog, select the *Dimstyles.dlb* file (or whatever file you want to save to), then click **Open**.

Tip: You can create a new library file if you want by entering a name in the **File name** edit box.



3. In the left pane of the **Transfer** dialog, select the dimension style you want to save, then click **Export Item**. To export the entire list, just click **Export All**. The library file is updated.
4. Click **OK**.

If you want to import the custom dimension styles into your catalog dimension styles library or the project-specific dimension styles library, see the next topic, *Importing Dimension Styles from a Dimension Styles Library File*.

Importing Dimension Styles from Dimension Styles Library File

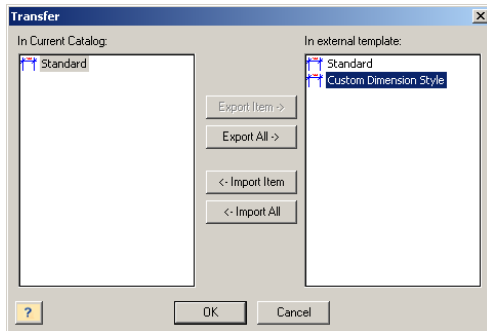
If you have saved customized dimension styles to the dimension styles library file, you can import the dimension styles into your catalog dimension styles library or any project-specific dimension styles library.

To import dimension styles from a dimension styles library file:

1. In the **Dimension Styles** dialog, click **Transfer**.

Chapter 38 Text & Dimension Styles

2. In the **Open** dialog, select the *Dimstyles.dlb* file (or whatever file you want to import dimension styles from), then click **Open**.



3. In the right pane of the **Transfer** dialog, select the custom dimension style you want to import, then click **Import Item**. Or, to import the entire list, just click **Import All**. The list in the left pane is updated.
4. Click **OK**.

Chapter 39

Light Sources

Light sources are basically light bulbs. Light sources are contained in a light source library which is accessible through the Catalog Manager as well as the Lights property page of light fixtures. You can edit existing light sources as well as import your own light source files into the library.

If you want to change a light fixture's light source, see *Editing a Light Fixture's Light Source* on page 96.

Things You Should Know About Editing Light Sources

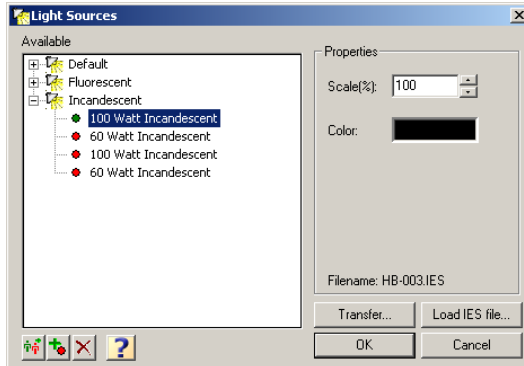
Light sources are basically light bulbs. They are applied to light fixtures. When you add or edit a light source through the Catalog Manager, the custom light source is saved with the catalog, and is only available when editing light sources in the catalog. If you add or edit a light source when editing a light fixture that has been inserted in your drawing, however, the customized light source is only available in the current project when editing the properties of inserted light fixtures. The light source library in the catalog remains unchanged. This is because the light source library in the catalog is separate from the light source library in the current drawing.

The reason that there is a project-specific light source library is so that any light sources used in your project are always saved with the project, making it possible to share your project with others and always maintain your customized light sources.

If you want light sources that you have customized in your catalog to be available in your project-specific light source library, or vice versa, you can use the Transfer tool to save the custom light sources to the external light source library file (*Lights.llb*), then import the custom light source from the library file into the other light source library.

Customizing the Light Source Library

The light source library contains an assortment of light sources, mainly fluorescent and incandescent light bulbs, that can be applied to lighting fixtures.



You can customize the light source library by adding and editing light sources. Most manufacturers of lighting equipment provide downloadable .IES photometric data files free of charge on their web sites for use in lighting calculations. Once you've added a light source to your library, you can edit its intensity and color if you want.

Light sources are listed in groups so you can organize and find them easily. You can create, rename and delete groups.

When you edit the light source library in your catalog, the light sources are saved with your catalog. If you edit the light source library while editing an element, the light sources are saved in the current drawing only.


To access the light source library in the Catalog Manager:

1. Select **File > Catalogs > Catalog Manager**, or right-click an element in the catalog panel and select **Catalog Manager**.
2. In the **Catalog Manager**, select **Libraries > Light Sources**. The **Light Sources** dialog appears.


To access the light source library through an inserted light fixture:

1. Select the light fixture.
2. Right-click and select **Properties**, or select **Edit > Modify Elements > Properties**.
3. In the **Lights** dialog, select the Lights tab.
4. Click **Add** or **Edit** to access the light source library.

To add a group to the light source library:


1. Right-click an existing group and select **Add Group**, or click the Add Group button below the light source window.  An entry is added to the list.
2. Type a name for the group, then press ENTER.

To delete a group from the line styles library:

1. Select the group to delete.
2. Right-click and select **Delete Group**, or click the Delete button below the light source window. 

Note: A group cannot be deleted if it contains light sources.

To add a light source to the list:

1. Select the group you want to add the light source to.
2. Click the Add Item button below the light source window, or right-click in the light source window and select **Add Item**. A new entry is added to the list. 
3. Type a name for the light source and press ENTER.
4. Click the **Load IES File** button.
5. Locate and select the *.ies file and click **Open**. The filename is displayed in the right pane of the **Light Sources** dialog.
6. If you want to change the intensity of the light, specify the desired percentage in the **Scale** edit box. For example, if the light source is a 60 Watt bulb, a value of 50% would make the bulb function like a 30 Watt bulb.

7. If you want to change the color of the light, click the **Color** edit box and make a selection from the **Color** dialog.

To apply a different IES file to a light source:

1. Select the light source in the list.
2. Click the **Load IES File** button.
3. Locate and select the *.ies file and click **Open**. The filename is displayed in the right pane of the **Light Sources** dialog.


To edit the intensity of a light source:

1. Select the light source in the list.
2. In the **Scale** edit box, specify how much you want to scale the intensity in terms of a percentage. For example, if the light source is a 60 Watt bulb, a value of 50% would make the bulb function like a 30 Watt bulb.

To edit the color of a light source:

1. Select the light source in the list.
2. Click the **Color** edit box.
3. In the **Color** dialog, select the color you want, then click **OK**.

To delete a light source from the library:

1. Select the light source in the list.
2. Right-click and select **Delete**, or click the Delete button below the light source window. 

Saving Customized Light Sources to the Light Source Library File

If you have added or edited light sources in either the catalog light source library or project-specific light source library, you can save the custom light sources to the external light source library file (*Lights.llb*). You can then import the customized light sources from the library file into any light

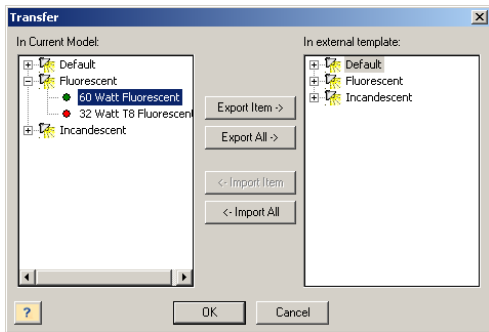
source library, whether that be the catalog light source library or project-specific light source library. The library file basically acts like a shuttle between libraries.

You can save light sources to the default light source library, or create a new library to save them in.

To save light sources to the light source library file:

1. In the **Light Sources** dialog, click **Transfer**.
2. In the **Open** dialog, select the *Lights.llb* file (or whatever file you want to save to), then click **Open**.

Tip: You can create a new library file if you want by entering a name in the **File name** edit box.



3. In the left pane of the **Transfer** dialog, select the light source you want to save, then click **Export Item**. To export the entire list, just click **Export All**. The library file is updated.

4. Click **OK**.

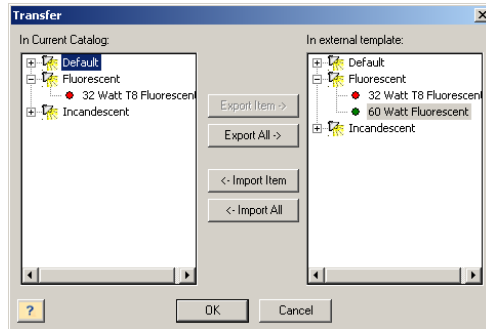
If you want to import the custom light sources into your catalog light source library or the project-specific light source library, see the next topic, *Importing Light Sources from a Light Source Library File*.

Importing Light Sources from a Light Source Library File

If you have saved customized light sources to the light source library file, you can import the light sources into your catalog light source library or any project-specific light source library.

To import light sources from a light source library file:

1. In the **Light Sources** dialog, click **Transfer**.
2. In the **Open** dialog, select the *Lights.llb* file (or whatever file you want to import light sources from), then click **Open**.



3. In the right pane of the **Transfer** dialog, select the custom light source you want to import, then click **Import Item**. Or, to import the entire list, just click **Import All**. The list in the left pane is updated.
4. Click **OK**.

Specifying the Location of the Light Source Directory

By default, light sources are located in the program's Lights directory. If you move your Lights directory to another location on your system, you will need to specify the location of the Lights directory so that light sources can be accessed by the program.

To specify the location of your Textures directory:

1. Select **Settings > Program Settings** or click the Program Settings button on the Settings toolbar.
2. In the **Program Settings** dialog, select the **General** tab.
3. In the *File Paths* area, click on the **Lights Directory** to select it.
4. Click **Modify**.

5. In the **Browse For Folder** dialog, locate the folder containing your light sources, then click **OK**.
6. Click **OK** in the **Program Settings** dialog.

Glossary

This handy Glossary contains definitions of terms and abbreviations used in the program and in this User's Guide. Entries are listed in alphabetical order for your convenience.

Glossary

A

Alkaline – Having a PH of more than 7.

Alt Code – Alternate Code. An extra identification code that is used to link an element in the program's catalog to the databases of other applications.

Ambient – A general level of light that is everywhere in the scene.

Angle Snap – Makes elements move/rotate at specific increments (angles).

Antialiasing – A method of improving image quality by smoothing out jagged edges. This is achieved by adjusting pixel positions or setting pixel intensities so that there is a more gradual transition between the color of a line and the background color.

Array – A method of copying an element into a pattern of rows and/or columns.

Artifacts – Fuzz or distortion in a graphic image or sequence of video images. Large digital pixels ("blocks") and jerkiness in the video stream are examples of artifacts.

Aspect Ratio – The ratio of width to height.

Automatic Save – Saves your drawing for you at specified intervals without prompting.

B

Beam – In a deck frame, structural member supported by posts that acts to support the deck's floor joists.

Berm – A mound or bank of soil without formal sides. You often see large berms on the sides of highways, which are used for noise control.

BLD – BUILD file. The drawing file produced by the program. The extension given to the program's drawing files.

BMP – Bitmap. An image file whose bits are referenced to pixels.

C

Catalog Directory – The directory containing the Master Catalog and other catalogs that you have created.

Catalog Panel – The window on the right side of the screen that displays the contents of the current catalog.

Collision Control – An intelligent drawing aid that prevents building elements from being inserted where they won't fit.

Commander – An editing window that appears when certain functions are chosen. It provides precise control over such things as distance and direction.

D

Daylight Saving Time – Time usually one hour ahead of standard time.

Delimiter – A character that marks the beginning or end of a unit of data.

Diffuse – The amount of color that is reflected when an element is illuminated by a light.

Division – A construction division identification. In North America, CSI divisions are used.

DLB File – Dimension Style Library File. Contains Dimension Styles.

DPI – Dots per inch. The measurement of resolution for printers.

Drag and Drop Mode – The default mode you are in when you select an element for editing. You can move and rotate elements with your mouse when you are in Drag and Drop Mode.

Drawing Aids – Tools that control the way your cursor works and the way elements are inserted.

Duplicate – Copies a selected element on the same location.

DWG – Standard file format for saving vector graphics in applications like AutoCAD.

DXF – Drawing Exchange Format. An ASCII or binary file format of a CAD drawing.

E

Editor – A software application capable of editing text.

Element – A specific type of element, such as a door, having its own distinct properties (size, appearance, etc.).

Elevation – 1. The front, back and side views of a building. 2. The height of an element above the terrain.

Estimate – A report containing a listing of materials, quantities, unit costs, and total cost.

F

Filter – To exclude an element or location from being displayed, quantified or selected.

Floor Level – The height of a floor (location) above the ground (0).

G

Group – A container for a list of specific element types. For example, doors are organized in groups such as Bi-fold and Single Hinged.

H

Hatching – A pattern of lines used to fill a particular area of your drawing and to represent the material used for that area (e.g. concrete).

Head Height – The height at which the tops of openings, doors and windows are located relative to the floor level.

Hidden Line – A view mode where hidden lines are removed from the view, leaving only surfaces displayed.

HLB File – Pattern Library File. Contains hatching patterns.

Hyperlinks – Jumps (links) to external document files or Web addresses.

I

IES File – Name derived from Illuminating Engineering Society. A photometric data file (Lights file) containing Luminaire definition and information.

Interface – Program components that you see on the screen and use to perform tasks.

J

Joist – One of a parallel set of structural members used to support floor loads. They, in turn, are supported by beams, girders, or bearing walls.

K

KLB File – Line Styles Library File.

L

Line Styles – Settings that determine the color and pattern of a line. Used in electrical wiring and dimension styles.

LLB File – Lights Library File.

Locations – Drawing layers containing definitions for wall height, floor level, head height and ceiling level.

Lumen – A Lumen is equal to one foot-candle (the amount of light one candle generates one foot away) falling on one SQUARE foot of area.

Luminaire – The international term for a piece of lighting equipment. The complete unit including lamp, fixture, and other parts.

M

Magnetic North – Magnetic North is the magnetic north pole. It is the focus of the planet's magnetic field and is the point magnetic compasses point toward.

MLB File – Materials Library File.

N

NLB File – Linetype Library File.

Nosing – The portion of a stair tread that projects over the riser.

O

Open GL – A 3D graphics Application Programming Interface (API) that includes routines for shading, texture mapping, texture filtering, anti-aliasing, lighting, geometry transformations, etc.

Ortho – A Drawing Aid that restricts drawing to straight up, down, left, or right.

Orthogonal View – An alternate name for Parallel View in which all drawing lines are parallel and the effect of distance is eliminated. Contrasts with Perspective View.

P

Pan – A control that allows you to move the on-screen view by dragging up, down, left, or right.

Parallel View – A 3D view that eliminates the effect of distance from a view. In Parallel View, all drawing lines are parallel. Contrasts with Perspective View. Parallel View is sometimes called Orthogonal View.

Parametric – Having a set of physical properties that determines the characteristics of an element.

Percent (%) Below Horizon – The percentage that you want the background to appear below ground level (absolute zero).

Perspective View – A 3D view in which the scale of an element decreases according to its distance from the viewer. Drawing lines converge to a vanishing point. Perspective View represents the way an element would appear to the human eye.

Photometric Data File – A file that allows you to define complex light distributions based on physical lamp properties. When loading a photometric file, a photometric web is constructed that defines the intensity of light for any direction from a light source.

Pixel – A word invented by combining the two words “picture” and “element”. The smallest unit of color on a computer display. Size varies by resolution.

Pixel Search Distance – The Pixel Search Distance determines how close your cursor (which is attached to an element you are inserting) needs to be to an existing element before Object Snap occurs.

Plan View – A flat, 2D view from above.

Plateau – A relatively large, flat area of land situated above the adjacent land.

Project Directory – The location of the default directory in which projects are stored.

Project Estimate – A report containing a listing of materials, quantities, unit costs, and total cost.

Q

Quantity Report – A list of the type and quantity of materials in your model. Also known as a Materials List or Bill of Materials.

R

Render – To display a 3D model with surfaces, textures, lighting and shading.

Rendered Mode – A display mode where solid colors and textures are applied to surfaces, creating a realistic 3D effect.

Rendered Outline Mode – A display mode where solid colors and textures are applied to elements, and surfaces are outlined with a black line for high definition.

Retaining Wall – A wall constructed to contain a lateral force, such as a bank of dirt.

S

Shininess – The ability of a texture to reflect light.

Slab – Concrete pavement, i.e. driveways, garages, and basement floors.

Slope – Ground that forms an incline.

Snap Angle – The increment angle your cursor will snap at (if Angle Snap is enabled).

Specular – A shininess factor that determines the amount of highlighting you see on an element from light sources.

Spreadsheet – A table of values arranged in rows and columns.

Status Bar – The bar below the drawing area that contains the Help message for the current state or tool. Also contains drawing aid buttons.

Stringer – The inclined side of a stair that supports the treads and risers.

T

Template – A set of pre-defined properties that determines the setup and outcome of something (like a report).

Temporary Directory – The default directory in which temporary files generated by the program are saved.

Terrain – A piece of land.

Tile Height – The height of one tile in a texture pattern. The program generates large images by “tiling” texture bitmaps horizontally and vertically.

Transparency – The degree to which a texture can be penetrated by light.

Tread – The horizontal part of a stair that is stepped on.

True North – True North is the geographic North Pole. It is located at 90 degrees North latitude and all lines of longitude converge at the pole.

TSL File – Text Style Library File

V

View Filter – A dialog used for displaying and hiding elements and/or locations, and controlling the selectability of elements.

VRML – Virtual Reality Modeling Language. The open standard for virtual reality on the Internet.

W

Windowing – A selection method where you click and drag a rectangle, from left to right, around elements you want to select.

Wireframe View – The default 3D view where all lines making up elements are displayed. It allows you to see through elements.

WRL File – WORLD file. Capable of being viewed in VRML viewers.

X

X Axis – One of the three drawing axes. An X coordinate specifies a horizontal distance.

Y

Y Axis – One of the three drawing axes. A Y coordinate specifies a vertical distance.

Z

Z Axis – One of the three drawing axes. The Z coordinate indicates either elevation or depth.

Z Buffer – A block of memory used to store the Z-axis value of a pixel on the screen. Higher depth values improve detail of 3D display but may slow the system.

Zenith - Culminating point.

Zoom Realtime – Magnifies or shrinks the view as you click and drag with your mouse.

Zoom to Fit – Zooms the drawing to the extents of the drawing area, creating a maximized view of your entire design.

Zoom Window – Magnifies an area of your drawing that you select by windowing.

Catalog Index

When you want to know where to find something in the catalog, this is the place to look. The Catalog Index contains a list of elements — everything from arbors to windchimes — and tells you what tool to select to access each one, and what group to select in the catalog. Items are listed in alphabetical order for your convenience.

Catalog Index

Items	Tool to Select	Catalog Groups
Arbors	Insert > Landscape > Exterior Structures 	Arbors and Trellis
Arrows, north	Insert > Landscape > Exterior Accessories 	North Arrows
Badminton Courts	Insert > Landscape > Exterior Structures 	Sports
Barbecues	Insert > Landscape > Exterior Accessories 	Outdoor Cooking and Heating
Bark	Insert > Landscape > Fills 	Fills
Basketball Nets and Courts	Insert > Landscape > Exterior Structures 	Sports
Benches, exterior	Insert > Landscape > Exterior Furniture 	Benches and Storage
Bird Baths, Feeders & Houses	Insert > Landscape > Exterior Accessories 	Decorative Accessories
Borders, garden	Insert > Landscape > Exterior Accessories 	Decorative Accessories
Cars	Insert > Landscape > Exterior Accessories 	Other Outdoor Items
Chairs, patio	Insert > Landscape > Exterior Furniture 	Chairs
Columns, decorative	Insert > Landscape > Exterior Accessories 	Decorative Accessories
Concrete Edging	Insert > Landscape > Edging 	Rail Edging
Concrete fills	Insert > Landscape > Fills 	Fills
Corner Accents	Insert > Landscape > Exterior Accessories 	Decorative Accessories
Deck Box	Insert > Landscape > Exterior Furniture 	Benches and Storage
Doghouses	Insert > Landscape > Exterior Structures 	Storage & Enclosures
Edging	Insert > Landscape > Edging 	Plastic Edging Post Edging Rail Edging
Fire Hydrant	Insert > Landscape > Exterior Accessories 	Irrigation














Catalog Index

Items	Tool to Select		Catalog Groups
Fireplaces, outdoor	Insert > Landscape > Exterior Accessories		Outdoor Cooking and Heating
Fountains	Insert > Landscape > Exterior Accessories		Decorative Accessories
Garages, detached	Insert > Landscape > Exterior Structures		Storage & Enclosures
Garden Boxes	Insert > Landscape > Exterior Structures		Planters and Garden Boxes
Garden Hoses	Insert > Landscape > Exterior Accessories		Irrigation
Gazebos	Insert > Landscape > Exterior Structures		Storage & Enclosures
Golf Hole	Insert > Landscape > Exterior Structures		Sports
Gravel	Insert > Landscape > Fills		Fills
Greenhouse	Insert > Landscape > Exterior Structures		Storage & Enclosures
Hammocks	Insert > Landscape > Exterior Furniture		Swings and Hammocks
Hoses, garden	Insert > Landscape > Exterior Accessories		Irrigation
Hot Tubs	Insert > Landscape > Exterior Structures		Pools & Hot Tubs
House Templates	Insert > Landscape > Exterior Structures		House Templates
Jungle Gyms	Insert > Landscape > Exterior Structures		Playground
Lawn Edging	Insert > Landscape > Edging		Plastic Edging
Lights, outdoor	Insert > Landscape > Landscape Lighting		Exterior Fixtures Ground Lighting Light Posts
Lounge Chairs, outdoor	Insert > Landscape > Exterior Furniture		Chairs
Mail Boxes	Insert > Landscape > Exterior Accessories		Other Outdoor Items
Merry-Go-Round	Insert > Landscape > Exterior Structures		Playground

Catalog Index

Items	Tool to Select		Catalog Groups
North Arrows	Insert > Landscape > Exterior Accessories		North Arrows
Obelisks	Insert > Landscape > Exterior Accessories		Arbors and Trellis
Patio Furniture	Insert > Landscape > Exterior Furniture		Tables Chairs Benches and Storage
Patio umbrellas	Insert > Landscape > Exterior Accessories		Tables
Picnic Tables	Insert > Landscape > Exterior Furniture		Tables
Planters	Insert > Landscape > Exterior Accessories		Planters and Garden Boxes
Play Gyms & Play Houses	Insert > Landscape > Exterior Structures		Playground
Ponds	Insert > Landscape > Fills		Fills
Pools	Insert > Landscape > Exterior Structures		Pools & Hot Tubs Playground
Propane Heater	Insert > Landscape > Exterior Accessories		Outdoor Cooking and Heating
Sand	Insert > Landscape > Fills		Fills
Sandbox	Insert > Landscape > Exterior Structures		Playground
Screened Rooms	Insert > Landscape > Exterior Structures		Storage & Enclosures
See-Saw	Insert > Landscape > Exterior Structures		Playground
Sheds	Insert > Landscape > Exterior Structures		Storage & Enclosures
Soil	Insert > Landscape > Fills		Fills
Sprinklers	Insert > Landscape > Irrigation		Pop-up Sprinklers
Sundials	Insert > Landscape > Exterior Accessories		Decorative Accessories
Swing Sets	Insert > Landscape > Exterior Structures		Playground

Catalog Index

Items	Tool to Select		Catalog Groups
Swings	Insert > Landscape > Exterior Furniture		Swings and Hammocks
Tables, patio	Insert > Landscape > Exterior Furniture		Tables
Tennis Courts	Insert > Landscape > Exterior Structures		Sports
Trampoline	Insert > Landscape > Exterior Structures		Sports
Trellis	Insert > Landscape > Exterior Accessories		Arbors and Trellis
Umbrellas, patio	Insert > Landscape > Exterior Accessories		Tables
Volleyball Courts	Insert > Landscape > Exterior Structures		Sports
Water	Insert > Landscape > Fills		Fills
Water Well	Insert > Landscape > Exterior Accessories		Irrigation
Weather Vanes	Insert > Landscape > Exterior Accessories		Decorative Accessories
Windchimes	Insert > Landscape > Exterior Accessories		Decorative Accessories
Windmill	Insert > Landscape > Exterior Accessories		Decorative Accessories
Wood Edging	Insert > Landscape > Edging		Post Edging Rail Edging

Index

1-2-3

- 2D Designer's View, 20
- 2D Image export, 190
- 2D Percent Open, 60
- 2D Plan Preview, 226
- 2D Plan View, 20
- 2D plant representation, editing, 112
- 2D Viewing
 - in catalog panel, 226
 - in drawing area, 20
- 3D Home Architect Online, 7
- 3D Model export, 190
- 3D Model View
 - 3D Overview, 21
 - 3D Perspective, 21
 - about, 21
 - changing the camera height, 211
 - changing the display mode, 22
 - changing the target height, 211
 - changing the viewing field angle, 213
 - changing your viewpoint, 210
 - changing, 210
 - creating new, 210
 - flying around in, 214
 - moving the camera, 210
 - moving the target, 211
 - perspective view mode, 211
 - selecting a preset camera angle, 212
 - sliding in, 214
 - spinning the view, 214
 - walking around in, 214
- 3D Overview, 212
- 3D Percent Open, 60
- 3D Perspective, 211
- 3D Studio files
 - exporting to, 190
 - importing, 224
 - selecting to apply to an element, 225

- 3D Viewing, 21
- 3DS files
 - exporting to, 190
 - importing, 224
- 3DTrueView
 - about, 174
 - adjusting image brightness, 177
 - changing refresh rate during lighting calculations, 177
 - creating fog effect, 178
 - creating smoke effect, 178
 - enabling ambient lighting, 178
 - rendering a view, 176
 - save location, 179
 - save name, 179
 - saving multiple renderings, 180
 - saving to file, 179
 - setting quality, 176
 - setting the viewpoint, 174
 - setting up the scene, 174
 - specifying image size, 180
 - turning daylight off, 177
 - using antialiasing, 178

A

- Above-ground pools, 84
- Accessories
 - inserting, 92
- Add City, 175
- Add Group
 - catalog, 222
 - light source library, 259
 - line styles library, 245
 - materials library, 236
- Add Linestyle, 245
- Add Location, 200
- Add Material, 237
- Add Text with Leader, 161

Add Text, 160
Advanced Features, 5
Aligned Dimensions, 164
Alignment of text, 161
Alkaline, 264
Alt Code, 229
Ambient lighting, enabling, 178
Angle from Joists, 67
Angle Snap, 131
Angle, camera, 212
Angle, slope, 51
Angle, view, 210, 213
Angles, specifying, 140
Annotation
 Text with Leader, 161
 Text, 160
Antialiasing
 3DTrueView, 178
Appearance page, 228
Appearance properties, 228
Appearance, elements, 148, 228
Arbors, 84
Area/Perimeter Calculator, 135
Array, 147
Artifacts, eliminating, 197
Auto Name, 227
Auto-cut terrain around building, 46
Automatic name generation
 editing the formula, 227
 using, 227
Automatic Save, 185

B

Background color, drawing area, 196
Background, in 3D views, 215
Badminton courts, 84
Base Height, 138
Basic property page, 228
Basic View Control Toolbar, 10
Basics, program, 5
Basketball courts, 84
Beds, garden, 104
Behavior
 Photo Board, 154
Behavior page, 231
Benches, 88
Berms
 editing height, 48
 editing peak shape, 48

Berms/Trenches
 creating, 47
 deleting, 48
 moving, 48
 stretching, 48
Bill of Materials, 170
Billboard behavior, 154
Billboards, 154
Bird baths, 92
Bird feeders, 92
Bird houses, 92
Bitmaps
 exporting to, 190
 using your own in materials, 239
Blank Project, 4
Block Import Options, 224
Bloom time, 117
BMP
 exporting to, 190
 using your own in materials, 239
Board Offset, 58, 61
Board Spacing, 58, 61
Board Style, 58, 61
Borders, garden, 92
Box planters, 92
Boxes, garden, 84
Branded Content Providers, 7
Breaking
 edging, 109
 fences, 57
 retaining walls, 77
Brick, 77
Brightness, image, 177
Broderbund.com, 7
Building 64
Building elements, filtering from view, 27
Building Locations
 adding, 200
 current, 200
 defining, 200
 deleting, 200
 dimming, 201
 filtering from view, 28
 making selectable/non-selectable, 31
Building lot, 42, 43

C

Cabanas, 84
Camera Height, changing, 211

- Cameras
 - changing the height of, 211
 - looking through, 21
 - moving, 210
 - orbiting around targets, 214
 - placing new, 210
 - resetting, 215
 - turning on and off, 210
- Cars, 92
- Cartesian Coordinate System, 139
- Cartesian coordinate system, 140
- Cascade Open Views, 205
- Catalog Manager, about, 222
- Catalog Panel
 - about, 11
 - displaying/hiding, 195
 - resizing, 195
- Catalog Properties, 234
- Catalogs
 - adding a group to, 222
 - changing preview display, 226
 - closing, 234
 - creating copies of, 232
 - creating new, 231
 - deleting elements from, 233
 - deleting groups from, 223
 - editing elements, 223
 - importing elements into, 232
 - opening, 233
 - previewing images in, 226
 - renaming groups in, 222
 - saving edited elements from your drawing, 224
 - saving under different name, 232
 - saving, 232
 - viewing properties of, 234
- Categories
 - adding to catalogs, 222
 - deleting in catalogs, 223
 - renaming in catalogs, 222
- Ceiling Height, 200
- Centered text, 161
- Chairs, patio, 88
- Change Display Every _ Steps, 177
- City, 175
- Click-and-drag insertion method, 14
- Close Catalog, 234
- Closed Riser, 72
- Closing
 - catalogs, 234
- Closing projects, 187
- Collision Control, 131
- Color
 - Background (drawing area), 196
 - changing an element's, 148, 228
 - light sources, 259
 - text, 161, 251
 - toolbar areas, 194
 - toolbars, 194
- Color Bleed, 179, 238
- Colors
 - applying to the terrain, 46
 - editing an element's, 228
 - editing material color, 238
 - of plants throughout growing season, 117
 - viewing an element's, 228
- Columns
 - decorative, 92
- Commander
 - displaying, 138
 - selecting a reference point for actions, 139
 - specifying insertion heights, 138
 - using to rotate elements, 140
 - using when curving elements, 141
 - using, 138
- Common plant names, 116
- Complexity of care (plant), 116
- Component Display, 226
- Components, appearance of, 228
- Concrete slabs
 - applying different materials to, 74
 - creating, 72
 - deleting, 74
 - editing thickness, 73
 - moving, 73
 - reshaping, 73
 - resizing, 73
 - rotating, 73
- Contents, package, 2
- Context-sensitive menus, 15, 144
- Contours, showing, 46
- Convert File From, 225
- Coordinate icon, displaying/hiding, 138
- Coordinate system
 - Cartesian, 140
 - Polar, 140
 - selecting, 139
- Coordinates, entering, 140
- Copies (print), 188
- Copying

- elements, 146
- Corner details, 92
- Corrupted projects, repairing, 184
- Country, 175
- Create Elevation View, 217
- Creating 104, 164
- Cropped textures, 239
- Cross-section, creating, 218
- Current View Size, 180
- Curving
 - deck edges, 65
 - deck opening edges, 69
 - retaining walls, 76
 - using the Commander, 141
- Custom textures, 239
- Customer Service, 6
- Customizing
 - catalogs, 221
 - dimension styles, 249
 - elements, 223
 - light sources, 257
 - line styles, 243
 - materials, 235
 - screen, 193
 - text styles, 249
 - view windows, 203
 - views, 209
- Cut Opening
 - deck, 68
- Cut-off textures, 239

D

- Damaged projects, repairing, 184
- Date and time, 175
- Daylight Savings, 175
- Daylight, turning off, 177
- Deck Openings
 - curving edges, 69
 - inserting, 68
 - removing, 69
 - reshaping, 68
 - resizing, 68
- Deck Stairs
 - controlling railing display, 71
 - deleting, 72
 - editing properties, 70
 - editing size, 70
 - inserting, 69
 - moving, 70

- parts, 70
- Deck tool, 64
- Decks
 - building with Deck tool, 64
 - changing direction of deck boards, 65
 - changing the railing style, 67
 - controlling display of railings, 67
 - controlling railings on deck stairs, 71
 - creating openings in, 68
 - curving edges, 65
 - curving opening edges, 69
 - deleting, 69
 - displaying footings under posts, 66
 - displaying skirting, 68
 - editing frame construction, 66
 - editing height, 65
 - editing posts, 65
 - inserting a deck floor, 64
 - inserting stairs, 69
 - moving, 64
 - removing openings, 69
 - reshaping openings, 68
 - reshaping, 65
 - resizing openings, 68
 - stretching, 65
 - viewing tutorial, 5
- Default save directory, 185
- Delete Element, 233
- Delete Group
 - light source library, 259
 - line styles library, 245
 - materials library, 237
- Delete Linestyle, 246
- Delete Material, 237
- Deleting
 - berms/trenches, 48
 - building locations, 200
 - deck openings, 69
 - deck stairs, 72
 - decks, 69
 - dimension styles from library, 253
 - dimensions, 165
 - edging, 110
 - elements, 147, 233
 - elevations, 217
 - exterior accessories, 93
 - exterior furniture, 89
 - exterior structures, 85
 - fences, 59
 - filled areas, 105

- gates, 61
 - groups from catalogs, 223
 - groups from light source library, 259
 - groups from line styles library, 245
 - groups from materials library, 237
 - groups in View Manager, 204
 - hills, 47
 - irrigation, 100
 - light source from library, 259
 - line styles from library, 246
 - linetypes from linetypes library, 247
 - materials from library, 237
 - outdoor light fixtures, 98
 - paths, 81
 - patio slabs, 74
 - photo boards, 156
 - plants, 114
 - plateaus, 49
 - retaining walls, 77
 - section views, 220
 - site boundary, 42
 - slopes, 51
 - sprinklers, 100
 - text with leader, 163
 - text, 161
 - valleys, 47
 - views in View Manager, 207
- Depth below ground level, 66
- Deselecting elements, 15
- Designer's View, 20
- Dimension Styles
- adding, 253
 - changing, 165
 - customizing dimension styles library, 252
 - customizing library, 252
 - deleting from library, 253
 - editing, 253
 - important considerations before editing, 252
 - importing dimension styles from library into catalog, 255
 - properties, 166, 253
 - saving to library file, 255
 - setting current, 163
- Dimensions
- about, 163
 - aligned, 164
 - changing style, 165
 - deleting, 165
 - displaying/hiding, 28
 - editing an element's, 148
 - filtering for selection, 32
 - linear, 164
 - moving dimension line, 164
 - scale, 188, 207
 - setting current style, 163
 - stretching, 165
- Dimming Percentage, locations, 201
- Direction, specifying, 140
- Disabling
- templates, 186
- Diseases page (Encyclopedia), 123, 124
- Display All But Framing, 220
- Display Filter, 26
- Display Framing, 220
- Display Mode, 22
- Display of graphics, improving, 197
- Display settings, adjusting, 4
- Displaying
- building elements, 27
 - cameras, 210
 - catalog panel, 195
 - Coordinate Icon, 138
 - dimensions, 28
 - electrical wiring, 28
 - project trace images, 29
 - selected building elements, 27
 - selected parts on elements, 226
 - text, 28
 - toolbars, 194
 - view tabs, 205
- Distance above current location or terrain, 145, 230
- Distance, measuring, 134
- Distance, specifying, 140
- Diving board, 84
- Division, 229
- Do not use Project Template, 186
- Doghouses, 84
- Door mats, 92
- Down to deck location, 70
- Down to previous location, 70
- Down to terrain, 70
- DPI, 264
- Dragging method of insertion, 14
- Drawing Grid
- displaying, 130
 - setting up, 130
 - turning on and off, 130
- Drawings, opening from older versions, 2
- Driveways, 80

Duplicate, 146
DXF export, 190

E

Edging

- breaking, 109
- changing length, 109
- changing material, 110
- cleaning up corners, 108
- deleting, 110
- editing height, 110
- editing width, 110
- inserting, 108
- moving, 109
- rotating, 109
- stretching, 109

Edit City, 175

Edit Linestyle, 245

Edit Material, 237

Edit menu, 15

Editing

- about, 143
- accessing edit commands, 144
- accessing edit tools, 15
- berms, 48
- building locations, 200
- catalogs, 222
- deck stairs, 70
- decks, 65
- dimension styles, 252
- dimensions, 164
- edging, 108
- element properties, 148
- elements in catalogs, 223
- exterior accessories, 92
- exterior furniture, 88
- exterior structures, 84
- fences, 57
- fills, 104
- gates, 60
- hills, 47
- leader with text, 162
- light fixtures, 96
- light sources, 258
- line styles, 244
- linetypes, 247
- materials, 236
- path elements, 80
- patio slabs, 73

- patterns, 241
- photo boards, 156
- plants, 112
- print scale, 207
- retaining walls, 76
- screen settings, 193
- sections, 219
- site boundary, 42
- slopes, 50
- text styles, 250
- text, 160
- views, 209
- wall elevation, 76
- wall height, 76
- wall width, 76

Editing Mode, 14, 144

Electrical Wiring

- displaying/hiding, 28
- making selectable/non-selectable, 32

Element Properties, 222

Elements

- changing display of in preview window, 226
- changing elevation, 145
- creating custom, 223
- deleting from catalogs, 233
- deleting, 147
- editing in catalogs, 223
- editing properties, 148
- filtering from view, 27
- importing 3D Studio files, 224
- importing into catalogs, 232
- inserting, 14
- moving, 144
- rotating, 145
- saving edited elements to a catalog, 224

Elevate tool, 145

Elevation

- editing an element's, 145
- exterior accessories, 92
- photo board, 156
- plants, 112
- retaining walls, 76

Elevation Marks

- editing properties of, 217
- moving, 216
- turning on/off, 216

Elevation Properties, 217

Elevations

- changing the target of, 217
- creating custom, 217

- deleting, 217
 - displaying marks for, 216
 - moving left or right, 216
 - viewing, 216
 - viewing/editing properties, 217
- Emissive, 179, 238
- Enable Ambient Lighting, 178
- Enable Collision Control, 131
- Enable Daylight, 177
- Enable Pre-Selection, 15
- Encyclopedia
- about, 115
 - accessing, 116
 - Diseases page, 123
 - Main page, 116
 - Notebook page, 121
 - Picture page, 122
 - Plant Care Calendar, 118
 - searching for a plant, 116
 - selecting a plant to add to a catalog, 125
 - selecting a plant to view, 116
 - World Map page, 120
- Estimate
- changing report format, 170
 - filtering, 170
 - generating, 170
 - printing, 170
 - saving, 170
 - specifying name, 171
 - specifying save location, 171
 - turning grid lines off, 170
 - viewing saved estimate, 171
- Excavated areas, 48
- Explicit Height, 70
- Export Model, 190
- Export View, 190
- Exporting
- current view, 190
 - custom light sources to library file, 259
 - custom line styles to library file, 246
 - dimension styles to library file, 255
 - materials to library file, 239
 - model, 190
 - text styles to library file, 251
 - to 3DS, 190
 - to BMP, 190
 - to DXF, 190
 - to JPG, 190
 - to TGA, 190
 - to WRL, 190
- Extend Stair, 70
- Extension Below Base, 76
- Exterior Accessories
- changing elevation, 92
 - deleting, 93
 - editing appearance, 93
 - editing size, 92
 - inserting, 92
 - moving, 92
 - rotating, 92
- Exterior Furniture
- applying different colors/materials, 88
 - deleting, 89
 - editing size, 88
 - inserting, 88
 - moving, 88
 - rotating, 88
- Exterior Structures
- applying different materials, 84
 - deleting, 85
 - editing size, 84
 - inserting house templates, 38
 - inserting, 38, 84
 - moving, 84
 - rotating, 84
- ## F
- Fences
- breaking, 57
 - deleting, 59
 - editing material, 59
 - editing properties, 57
 - inserting, 56
 - lengthening, 57
 - parts, 57
 - raked, 58
 - shortening, 57
 - stepped, 58
 - stretching, 57
- Field of vision, 213
- File Paths
- Projects Directory, 185
 - Templates directory, 186
 - Temporary Directory, 187
- Fills
- changing fill material, 105
 - creating, 104
 - deleting, 105
 - moving, 105

- reshaping, 104
- resizing, 104
- rotating, 105
- Filtering
 - building elements for selection, 30, 31
 - building elements from view, 27
 - building locations for selection, 31
 - dimensions for selection, 32
 - dimensions from view, 28
 - display, 26
 - electrical wiring from view, 28
 - elements/locations for selection, 29
 - framing, 220
 - landscape elements for selection, 30
 - landscape elements from view, 26
 - plants by disease, 123
 - plants by selected criteria, 124
 - project estimate, 170
 - project trace images from view, 29
 - text for selection, 31
 - text from view, 28
- Finishing commands, 14
- Fireplaces, outdoor, 92
- Fit To Page, 188
- Flip Opening
 - gates, 60
- Flip Swing
 - gates, 60
- Flipping
 - gate swing, 60
 - gates, 60
- Floor Level, 200
- Floor Locations
 - adding, 200
 - current, 200
 - defining, 200
 - deleting, 200
 - dimming, 201
 - filtering from view, 28
 - making selectable/non-selectable, 31
- Floors
 - deck, 64
- Flowers, 112
- Fly Around tool, 214
- Focal point, moving, 211
- Fog, 178
- Font Style, 161, 251
- Font, 161, 251
- Footings
 - displaying under deck posts, 66
- Format, project estimate, 170
- Fountains, 92
- Framing
 - changing, 220
 - displaying, 220
 - editing deck frames, 66
 - hiding, 220
- Furniture
 - outdoor, 88
- G**
- Garages, 84
- Garden beds, 104
- Garden borders, 92
- Garden boxes, raised, 84
- Gardens, 112
- Gates
 - deleting, 61
 - editing properties, 60
 - flipping swing, 60
 - flipping, 60
 - hinge side, 60
 - inserting, 59
 - moving, 60
- Gazebos, 84
- Generate Project Estimate, 170
- Generate Quantity Report, 170
- Geometry, editing, 148
- Global Settings, 175
- Glossary of Terms, 6, 263, 269
- Going 14
- Golf Holes, 84
- Graphics display, improving, 197
- Graphics print quality, 188
- Greenhouse, 84
- Grid
 - drawing, 130
 - snap, 130
- Grid Mesh Spacing, 46
- Grid Snap, 130
- Groups
 - adding to catalogs, 222
 - adding to light source library, 259
 - adding to line styles library, 245
 - adding to materials library, 236
 - deleting from catalogs, 223
 - deleting from light source library, 259
 - deleting from line styles library, 245
 - deleting from materials library, 237

- renaming in line styles library, 245
 - renaming in materials library, 237
 - renaming, 222
 - Growing season (plant), 117
 - Growth, plant, 116
 - Guarantee, 7
- ## H
- Hanging planters, 92
 - Hardware Acceleration, 196
 - Hatched view, 23
 - Head Height, 200
 - Heater, propane, 92
 - Height
 - Camera, 211
 - ceiling, 200
 - deck, 65
 - edging, 110
 - floor, 200
 - head, 200
 - insertion, 230
 - retaining walls, 76
 - specifying insertion height in Commander, 138
 - Target Height, 211
 - wall, 200
 - window, 200
 - Height (elevation)
 - editing an element's, 145
 - exterior accessories, 92
 - photo boards, 156
 - plants, 112
 - Help
 - E-mail Support, 6
 - Glossary of Terms, 6
 - Online Self-Support, 6
 - online, 5
 - technical, 6
 - Telephone Support, 6
 - Troubleshooting Guide, 6
 - Hidden Line view, 23
 - Hiding
 - building elements, 27
 - cameras, 210
 - catalog panel, 195
 - Coordinate Icon, 138
 - dimensions, 28
 - electrical wiring, 28
 - framing, 220
 - project trace images, 29
 - selected building elements, 27
 - text, 28
 - toolbars, 194
 - Hills
 - deleting, 47
 - editing height, 47
 - editing peak shape, 47
 - moving, 47
 - Hills, 46
 - Hot tubs, 84
 - House Templates, 38
 - How to Complete a Project, 5
 - How to Use the Tools, 5
 - Hug Terrain, 58, 73, 80
 - Hyperlinks, 231
- ## I
- Icon, coordinate, 138
 - IES files, importing, 259
 - If 138
 - Image Brightness, 177
 - Importing
 - 3D Studio Files, 224
 - dimension styles into dimension styles library, 255
 - elements into catalogs, 232
 - IES files, 259
 - light source files, 259
 - line styles into line styles library, 246, 260
 - materials from library file, 240
 - photo boards, 154
 - text files, 160
 - text styles into text styles library, 252
 - Improving graphics display, 197
 - Include railing on selected edges, 67
 - Include Railings, 71
 - Include skirting on selected edges, 68
 - Included Angle, 141
 - In-ground pools, 84
 - Inserting 38
 - about inserting elements, 14
 - driveways, 80
 - edging, 108
 - exterior accessories, 92
 - exterior furniture, 88
 - exterior structures, 38, 84
 - fences, 56
 - fills, 104

- gates, 59
 - irrigation, 100
 - landscaping, 101
 - light fixtures, 96
 - paths, 80
 - patios, 72
 - photo boards, 154, 155
 - plants, 112
 - property lines, 42
 - retaining walls, 76
 - sidewalks, 80
 - site boundary, 42
 - sprinklers, 100
 - text, 160
- Insertion Height, 138
- Insertion height, 230
- Insertion Method for line-drawn elements, 14
- Insertion Point, 230
- Insertion Point, editing an element's, 230
- Installing 3
- Installing the software, 3
- Irrigation
- deleting, 100
 - editing height, 100
 - editing spray, 100
 - inserting, 100
 - moving, 100
 - rotating, 100
- J**
- JPG
- exporting to, 190
 - using your own in materials, 239
- Jungle Gyms, 38, 84
- Justification, text, 161
- L**
- Landscape Lighting
- editing size, 96
 - inserting, 96
 - moving, 96
- Landscape tab, 10
- Landscaping
- decks, 63
 - edging, 108
 - fences, 55, 56
 - fills, 104
 - filtering elements for selection, 30
 - filtering landscape elements from view, 26
 - garden beds, 104
 - gates, 59
 - hills and valleys, 46
 - inserting furniture, 88
 - inserting house templates, 38
 - inserting structures, 38, 84
 - irrigation, 100
 - paths, 80
 - patios, 63
 - plants, 112
 - plateaus, 48
 - ponds, 104
 - retaining walls, 76
 - sidewalks, 80
 - slopes, 49
 - terrain, 46
 - toolbar, 10
 - viewing tutorial, 5
- Latin plant names, 116
- Latitude, 175
- Lawn edging, 108
- Leader arrow style, 162
- Leader with text, 161
- Learn menu, 5
- Learn to Use, 5
- Learning 5
- Left Justify Text, 161
- Lengthening
- edging, 109
 - fences, 57
 - paths, 80
 - retaining walls, 76
- Libraries
- Dimension Styles, 252
 - dimension styles, 252
 - Light Source, 258
 - Line Styles, 244
 - Linetypes, 247
 - Materials, 236
 - Patterns, 241
 - Text Styles, 250
- Lifetime (plant), 116
- Light fixtures
- changing the look of, 98
 - deleting, 98
 - editing light source, 96
 - editing size, 96
 - inserting outdoors, 96
 - moving, 96
 - turning on and off, 97

- turning on/off, 98
- Light posts, 96
- Light Sources
 - adding groups to library, 259
 - adding to library, 259
 - customizing library, 258
 - deleting from library, 259
 - deleting groups from library, 259
 - editing color, 259
 - editing in light fixtures, 96
 - editing intensity, 259
 - important considerations before editing, 258
 - saving custom light sources to library file, 259
 - specifying directory, 260
- Lighting preference (plant), 116
- Lights
 - customizing light source library, 258
 - outdoor, 96
 - path, 96
- Lights Directory, 260
- Line Styles
 - accessing library, 244
 - adding groups to line styles library, 245
 - adding to library, 245
 - deleting from library, 246
 - deleting groups from library, 245
 - editing in library, 245
 - important considerations when editing, 244
 - importing line styles from library into catalog, 246, 260
 - renaming groups in library, 245
 - saving custom line styles to library file, 246
- Linear Dimensions, 164
- Linetypes
 - adding to linetypes library, 247
 - customizing linetypes library, 247
 - deleting from library, 247
 - editing, 247
 - viewing an element's, 228
- Load city template, 176
- Load IES File, 259
- Location Dimming, 201
- Locations
 - adding, 200
 - current, 200
 - defining, 200
 - deleting, 200
 - filtering from view, 28
 - making selectable/non-selectable, 31
- lock, Maintain Aspect Ratio, 238
- Longitude, 175
- Look Around tool, 214
- Look Through, 21
- Lot lines, 42, 43
- Lounges, 88
- Lowering
 - decks, 65
 - elements, 145
 - outdoor accessories, 92
 - photo boards, 156
 - plants, 112
 - retaining walls, 76
- M**
- Mailboxes, 92
- Maintain Aspect Ratio, 156, 238
- Making 31
- Manufacturer, 229
- Mark Text, 217, 219
- Marks
 - elevation, 216
 - section, 219
- Materials
 - adding groups to materials library, 236
 - adding to library, 237
 - applying to terrain, 46
 - changing an element's, 148, 228
 - customizing materials library, 236
 - deleting from library, 237
 - deleting groups from library, 237
 - editing an element's, 228
 - editing in library, 237
 - editing surface properties, 179
 - important notes about editing, 236
 - importing from library file, 240
 - properties, 237
 - renaming groups in library, 237
 - rotating on elements, 149, 229
 - saving to library file, 239
 - scale of in rendered views, 238
 - Tile Height, 238
 - Tile Width, 238
 - using textures from outside sources, 238, 239
 - viewing an element's, 228
- Materials Paintbrush, 148
- Mats, door, 92
- Max. Post Spacing, 58
- Max. Riser Height, 71
- Maximizing a view window, 206

Measure tool, 134
Measuring area, 135
Menu Bar, 10
Menus
 for editing, 15, 144
Min number of vertices per component, 225
Modify Elements, 15, 144
month 114
Month, 175
Move Target, 217
Move Whole Element
 deck, 64
 fill, 105
 plateau, 49
 slab, 73
Moving
 berms, 48
 cameras for 3D views, 210
 deck stairs, 70
 decks, 64
 dimension line, 164
 edging, 109
 elements vertically, 145
 elements, 144
 elevation target, 217
 elevations marks, 216
 exterior accessories, 92
 exterior furniture, 88
 exterior structures, 84
 filled areas, 105
 gates, 60
 hills, 47
 irrigation, 100
 leader text, 163
 outdoor lighting, 96
 paths, 81
 photo boards, 155
 plants, 112
 plateaus, 49
 section marks, 219
 site boundary, 42
 slabs, 73
 slopes, 51
 sprinklers, 100
 text leader, 162
 text, 160
 toolbars, 195
 trenches, 48
 valleys, 47
Mulched beds, 104

Multiple text insert, 160

N

Name generation
 about, 227
 editing the formula, 227
 using, 227
Name, building location, 200
New Catalog, 231
New Project, 4
New View, 204
North arrows, 92
Nosing, 72
Note 132, 231
Notebook page (Encyclopedia), 121, 124
Notes, in properties dialog, 230
Number of copies, 188
Number, location, 200

O

Obelisks, 92
Object Snap, 130
OBJSNAP, 130
Older versions
 opening drawings from, 2
 uninstalling, 3
Online Help, 5
Online Software Help, 6
Open Catalog, 233
Open View, 204
Open, 184
Opening
 catalogs, 233
 drawing from older versions, 2
 projects from other programs, 39
 sample projects, 184
 saved estimate, 171
 saved project, 184
 saved projects, 184
 views, 204
Openings
 curving deck opening edges, 69
 inserting in decks, 68
 removing from decks, 69
 reshaping in decks, 68
 resizing in decks, 68
Orientation, element, 146, 228
Ortho, 131
Orthogonal view mode, 212

- Outdoor accessories, 92
- Outdoor fireplaces, 92
- Outdoor furniture, 88
- Outdoor structures, 38, 84
- Overhang
 - deck beams, 67
 - deck boards, 66
 - deck joists, 67
 - deck stairs, 72
- Override system units, 166, 254
- P**
- Package contents, 2
- Pads
 - applying different materials to, 74
 - inserting, 72
- Paintbrush, materials, 148
- Panning, 22
- Parallel view mode, 212
- Part No., 229
- Path lights, 96
- Paths
 - applying different materials, 81
 - deleting, 81
 - drawing, 80
 - editing length, 80
 - editing thickness, 81
 - editing width, 81
 - moving, 81
 - rotating, 80
- Patio furniture, 88
- Patio umbrellas, 92
- Patios
 - applying different materials to, 74
 - creating, 72
 - deleting, 74
 - editing thickness, 73
 - moving, 73
 - reshaping, 73
 - resizing, 73
 - rotating, 73
- Patterned properties, 239
- Patterned view, 23
- Patterns
 - customizing library, 241
 - editing on elements, 148
 - editing, 241
 - important notes about editing, 241
 - viewing an element's, 228
- Patterns, element, 228
- Perspective view mode, 211
- Perspective, 3D, 21
- Photo Boards
 - changing elevation, 156
 - changing to rotating, 156
 - changing to stationary, 156
 - creating transparency in, 156
 - deleting, 156
 - editing size, 156
 - importing, 154
 - inserting, 155
 - moving, 155
 - rotating, 155
 - saving to the catalog, 155
- Photo realistic images, 173
- Pick and drag insertion method, selecting, 14
- Pick Points insertion method, selecting, 14
- Picnic tables, 88
- Picture page (Encyclopedia), 122
- Pixel Search Distance, 131
- Place New Camera, 210
- Plan view
 - displaying, 20
 - rendered, 20
- Plans
 - sample, 184
- Plant Care Calendar 118
- Plant Encyclopedia
 - about, 115
 - accessing, 116
 - care requirements, 116
 - Diseases page, 123
 - growth information, 116
 - lighting preferences, 116
 - Main page, 116
 - Notebook page, 121
 - Picture page, 122
 - Plant Care Calendar, 118
 - searching for a plant, 116
 - selecting a plant to add to a catalog, 125
 - selecting a plant to view, 116
 - temperature preferences, 116
 - water requirements, 116
 - World Map page, 120
- Plant Growth Over Time, 114
- Plant Seasonal Change, 114
- Planters, 92
- Planting age, 113
- Plants

- adding to catalog from Encyclopedia, 125
- applying seasonal change, 114
- care calendar, 118
- changing age, 113
- changing elevation, 112
- deleting, 114
- diseases, 123, 124
- editing appearance in 2D plan view, 112
- editing size, 113
- Encyclopedia, 115
- filtering by selected criteria, 124
- forcing custom size, 113
- inserting, 112
- life expectancy, 116
- moving, 112
- seeing growth over time, 114
- soil requirements, 116
- usages, 116
- zone information, 116
- Plateaus
 - creating, 48
 - deleting, 49
 - editing height, 49
 - editing peak shape, 49
 - moving, 49
 - reshaping, 49
 - stretching, 49
- Playgrounds, 38, 84
- Playhouses, 38, 84
- Pointer tool, 14, 144
- Polar Coordinate System, 139, 140
- Ponds, 104
- Pool slide, 84
- Pools, 84
- Position, materials on elements, 149
- Post edging, 108
- Post Extension, 58
- Post Rotation, 58
- Post Width, 58
- Posts
 - deck, 65
 - fence, 58
- Precision for units of measure, 134
- Precision, 232
- Pre-Selection, enabling, 15
- Preset Cameras, 212
- Preview, element, 226
- Previous versions
 - opening drawings from, 2
 - uninstalling, 3
- Price, 229
- Pricing, editing, 171
- Print Scale, editing, 207
- Print Setup, 188
- Print to Scale, 188
- Print, 187
- Printing
 - area/perimeter calculations, 135
 - drawings, 187
 - editing the print scale, 207
 - project estimate, 170
 - quality, 188
 - to scale, 188
- Program Basics, 5
- Program Help, 5
- Project Estimate
 - changing report format, 170
 - filtering, 170
 - generating, 170
 - printing, 170
 - saving, 170
 - specifying name, 171
 - specifying save location, 171
 - turning grid lines off, 170
 - viewing saved estimate, 171
- Project Trace Image
 - displaying/hiding, 29
 - making selectable/non-selectable, 32
- Projects
 - opening, 184
 - repairing, 184
 - saving as templates, 185
 - saving, 185
- Projects Directory, 185
- Propane heater, 92
- Properties
 - appearance, 228
 - berms, 48
 - deck posts, 65
 - deck railings, 67
 - deck stairs, 70
 - decks, 65, 66
 - dimensions, 165
 - edging, 110
 - editing element properties in catalogs, 226
 - editing, 233
 - element composition, 148
 - element geometry, 148
 - element size, 148
 - element, 148, 233

- elevation, 217
- exterior accessories, 92
- exterior furniture, 88
- exterior structures, 84
- fence, 57
- gate, 60
- hills, 47
- light fixtures, 96
- of catalogs, 234
- path elements, 81
- photo boards, 156
- plants, 112
- plateaus, 49
- retaining walls, 76
- Section Properties, 219
- slopes, 51
- viewing an element's, 222
- viewing, 233
- Property lines, 42, 43
- Q**
- Quality, rendering, 176
- Quantity page, 229
- Quantity Reports
 - generating, 170
- R**
- Radius, 141
- Rail edging, 108
- Railings
 - changing a deck's railings, 67
 - on deck stairs, 71
 - on decks, 67
- Rails (edging), 108
- Raised garden boxes, 84
- Raising
 - decks, 65
 - elements, 145
 - outdoor accessories, 92
 - photo boards, 156
 - plants, 112
 - retaining walls, 76
- Raked fence, 58
- Recently used file list, 184
- Redo, 144
- Reference point icon, 138
- Reference point, commander, 139
- Refreshing the view during rendering, 177
- Registering the program, 4
- Rename Group
 - line styles library, 245
 - materials library, 237
- Renaming
 - groups in View Manager, 204
 - groups, 222
 - View Windows, 206
- Render 3DTrueView, 176
- Render to File, 179, 180
- Rendered 2D plan view, 20
- Rendered Outline view, 23
- Rendered properties, 238
- Rendered view, 23
- Rendering
 - about, 174
 - adjusting image brightness, 177
 - changing refresh rate during lighting calculations, 177
 - changing refresh rate, 177
 - creating a 3DTrueView rendering, 176
 - creating fog effect, 178
 - creating smoke effect, 178
 - enabling ambient lighting, 178
 - saving multiple image files, 180
 - setting quality, 176
 - setting the viewpoint, 174
 - setting up scene, 174
 - specifying image size, 180
 - turning daylight off, 177
 - using antialiasing, 178
- Repair Project, 184
- Report filter, 170
- Report format, estimate, 170
- Report, material, 170
- Requirements, system, 2
- Reset Camera, 215
- Reshaping
 - deck openings, 68
 - decks, 65
 - filled areas, 104
 - paths, 80
 - plateaus, 49
 - slabs, 73
- Resizing
 - catalog panel, 195
 - deck openings, 68
 - fills, 104
 - slabs, 73
- Resolution, setting, 4

Restoring previous view window arrangement, 206

Retaining Walls

- applying different finishes to, 77
- breaking, 77
- curving, 76
- definition, 266
- deleting, 77
- drawing, 76
- editing properties, 76
- lengthening, 76
- lengthening/shortening, 76
- rotating, 76
- shortening, 76

Right Justify Text, 161

Right-click menus

- accessing, 15, 144

Riser Height, 71

Rotating

- decks, 64
- edging, 109
- elements, 145, 146, 228
- exterior accessories, 92
- exterior furniture, 88
- exterior structures, 84
- filled areas, 105
- irrigation, 100
- materials on elements, 149, 229
- paths, 80
- photo boards, 155
- retaining walls, 76
- slabs, 73
- sprinklers, 100
- text, 160
- using the Commander, 140

S

Samples, 184

Sandboxes, 84

Satisfaction Guaranteed, 7

Save All, 185

Save As, 185

Save Catalog As, 232

Save Catalog, 232

Save city template, 175

Save directory, default, 185

Save Element to Catalog, 224

Save location, 3DTrueView image, 179

Save location, project estimate, 171

Save, 185

Saved Project, 184

Saving

- 3DTrueView renderings, 179
- automatically, 185
- catalogs, 232
- cities, 175
- custom materials to library file, 239
- dimension styles to library file, 255
- multiple rendered images in same project, 180
- photo boards to the catalog, 155
- project estimate, 170
- projects as templates, 185
- projects, 185
- text styles to the library file, 251

Scale

- drawing, 204
- editing, 207
- Fit to Page, 188
- light source intensity, 259
- of dimensions, 188, 207
- of materials, 238
- of text, 188, 207
- of views, 188, 207
- printing to, 188
- printouts, 207

Scene setup for rendering, 174

Screen area size, setting, 4

Screen layout, 9

Screen settings, 193

Screen tips, disabling, 15

Screened rooms, 84

Season Change, 114

Season Color Diagram, 117

Secondary Post Position, 58

Section Marks On/Off, 219

Section Properties, 219

Section Views

- creating, 218
- deleting, 220
- editing properties, 219
- editing, 219
- turning section marks on/off, 219
- viewing, 218

Select 28, 29

Select All, 15, 30

Select button (3D Studio file), 225

Select button (Encyclopedia), 125

- Select elements on current location only while in plan view, 201
- Select None, 30
- Select Previous, 15
- Select/Edit, 14, 144
- Selectability
 - of building elements, 30, 31
 - of building locations, 31
 - of dimensions, 32
 - of electrical wiring, 32
 - of elements in 2D plan view, 201
 - of project trace images, 32
 - of text, 31
 - specifying, 29
- Selecting
 - disabling pre-selection, 15
 - elements, 15
- Selection Filter
 - about, 29
 - filtering building elements, 30, 31
 - filtering building locations, 31
 - filtering dimensions, 32
 - filtering electrical wiring, 32
 - filtering landscape elements, 30
 - filtering project trace images, 32
 - filtering text, 31
- Selection mode, 14, 144
- Set Current Time, 175
- Set Decking Direction, 65
- Settings, saving in a template, 185
- Sheds, 84
- Shortcut menus, 15, 144
- Shortening
 - edging, 109
 - fences, 57
 - paths, 80
 - retaining walls, 76
- Show contours, 46
- Show Coordinate Icon, 138
- Show Grid (estimate), 170
- Show Grid, 135
- Show trunk in plan, 113
- Shrubs, 112
- Sidewalks, 80
- Simplify, 225
- Simplifying, 225
- Site Boundary, 42, 43
- Size
 - editing an element's, 148
 - printouts, 207
 - property page, 228
 - rendered image, 180
- Skirting, deck, 68
- Slabs
 - applying different materials to, 74
 - creating, 72
 - deleting, 74
 - editing thickness, 73
 - moving, 73
 - reshaping, 73
 - resizing, 73
 - rotating, 73
- Slide tool, 214
- Slopes
 - creating, 49
 - deleting, 51
 - editing angle, 51
 - editing height, 51
 - moving, 51
 - stretching, 50
- Smoke, 178
- Snap Angle, 131
- Snap Edge, 230
- Snapping
 - at defined angles, 131
 - orthogonal, 131
 - to drawing grid, 130
 - to objects, 130
- Soil beds, 104
- Soil requirements (plant), 116
- Spacing
 - deck boards, 66, 67
 - posts along beam, 66
- Specify Framing, 220
- Specular, 179, 238
- Spinning in 3D view, 214
- Spray properties, sprinkler, 100
- Sprinklers
 - deleting, 100
 - editing height, 100
 - editing spray properties, 100
 - inserting, 100
 - moving, 100
 - rotating, 100
- Square footage, measuring, 135
- Stairs
 - adding to deck, 69
- Standard Report Form, 170
- Start a New Project, 4
- Starting the program, 4

Startup dialog
 about, 4
 disabling, 4
Stationary photo board, 154
Status Bar
 about, 12
 displaying, 196
 hiding, 196
Stepped fence, 58
Stone, 77
Storage sheds, 84
Stretching
 berms, 48
 decks, 65
 dimensions, 165
 edging, 109
 fences, 57
 fills, 104
 paths, 80
 plateaus, 49
 retaining walls, 76
 section marks, 219
 slopes, 50
 text leader, 162
 trenches, 48
Structures, exterior, 38, 84
Sundials, 92
Supplier, 229
Support, technical, 6
Surface Properties, materials, 179
Survey, site, 42, 43
Swings, 38, 84
System Requirements, 2

T

Tables, patio, 88
Tables, picnic, 88
Tabs
 changing color of, 194
 disabling tabbed toolbars, 194
 displaying toolbars in 194
 hiding, 194
 showing, 194
 toolbar, 10
 view tabs, 205
Target
 changing the height of, 211
 moving an elevation's, 217
 moving, 211

 orbiting around the camera, 214
Target Height, changing, 211
Technical Support, 6
Temperature preferences (plant), 116
Template
 path to Templates directory, 186
 saving a project as, 185
 setting default, 186
 starting drawings without, 186
Templates, house, 38
Temporary Directory, 187
Tennis courts, 38, 84
Terrain
 applying a texture and color, 46
 base level, 46
 hugging, 73, 80
 settings, 46
 toolbar, 10
Terrain Base Level, 46
Terrain tab, 10
Text
 adding to drawing, 160
 changing justification, 161
 changing the style of inserted text, 161
 deleting, 161
 displaying/hiding, 28
 editing content, 160
 editing leader text, 163
 filtering for selection, 31
 importing text files, 160
 moving, 160
 rotating, 160
 scale, 188, 207
 with leader, 161
Text Color, 161, 251
Text Height, 161, 251
Text Styles
 changing the style of existing text, 161
 customizing text styles library, 250
 editing in elevation marks, 217
 editing in section marks, 219
 elevation marks, 217
 important considerations when editing, 250
 importing text styles from library into cata-
 log, 252
 saving to library file, 251
Text with Leader
 adding, 161
 changing leader arrow, 162
 deleting, 163

- editing text, 163
 - moving the text, 163
 - moving/stretching, 162
 - Textures
 - applied to elements, 228
 - applying different textures to elements, 148
 - applying to the terrain, 46
 - appropriate sizing for, 239
 - cropped, 239
 - cut-off, 239
 - specifying location of directory, 240
 - using different, 238
 - using from outside sources, 239
 - viewing an element's, 228
 - Textures Directory, 240
 - TGA
 - exporting to, 190
 - using your own in materials, 239
 - Thickness
 - patio slab, 73
 - Tile Height, 238
 - Tile Horizontally, 238
 - Tile Open Views, 205
 - Tile Vertically, 238
 - Tile Width, 238
 - Time of day, 175
 - Time Zone, 175
 - Title bar, 10
 - Toolbars
 - Basic View Control, 10
 - changing color of toolbar areas, 194
 - changing the background color of, 194
 - displaying in non-tabbed format, 194
 - displaying in tabs 194
 - hiding, 194
 - Landscape, 10
 - moving, 195
 - showing, 194
 - tabbed, 10
 - terrain, 10
 - Zoom and Navigate, 11
 - Tooltips on elements, 15
 - Topography, recreating, 45
 - Trampolines, 84
 - Transfer
 - dimension styles, 255
 - line styles, 246
 - materials, 239, 240
 - text styles, 251
 - Transparency, 179, 238
 - Transparency, in photo boards, 156
 - Trees, 112
 - Trellises, 92
 - Trenches
 - creating, 47
 - deleting, 48
 - moving, 48
 - stretching, 48
 - Troubleshooting Guide, 6
 - Trunk Diameter, 113
 - Tutorials, 5
- ## U
- Umbrella, patio, 92
 - Undo, 144
 - Uninstalling previous version, 3
 - Units of Measure, 134, 232
 - Usage (plant), 116
 - Use Solid Color, 238
 - Use Texture, 238
- ## V
- Valleys
 - deleting, 47
 - inserting, 46
 - moving, 47
 - Vegetable garden boxes, 84
 - View Filter
 - about, 25
 - filtering building elements from view, 27
 - filtering dimensions from view, 28
 - filtering landscape elements, 26
 - filtering locations from view, 28
 - filtering text from view, 28
 - View Manager
 - accessing, 204
 - adding groups to, 204
 - adding new views to, 204
 - deleting groups in, 204
 - deleting views in, 207
 - renaming groups, 204
 - View Mode
 - Parallel, 212
 - Perspective, 211
 - View Project Estimate, 171
 - View Sample Plans, 184
 - View Tabs
 - turning on/off, 205
 - View Windows

- cascading, 205
- creating new, 204
- creating, 204
- deleting, 207
- managing, 204
- maximizing, 206
- renaming, 206
- restoring the previous arrangement, 206
- switching between, 205

Viewing

- 2D Designer's View, 20
- 2D Plan View, 20
- cameras, 210
- elevations, 216
- in 3D, 21
- managing views, 204
- section views, 218
- switching between view windows, 205

Viewing Angle

- increasing/decreasing, 213
- selecting a preset camera angle, 212

Viewing Field, 213

Viewpoint in 3DTrueView renderings, 174

Viewpoint, 3D view, 210

Views

- exporting, 190
- opening, 204

Volleyball courts, 38, 84

VRML export, 190

W

Walk Around tool, 214

Wall Height, 76, 200

Walls

- editing elevation, 76
- editing height, 76
- editing width, 76
- retaining, 76

Water requirements (plant), 116

Weather vanes, 92

Width, wall, 76

Windchimes, 92

Windmills, 92

Wireframe view, 23

Wiring

- displaying/hiding, 28
- making selectable/non-selectable, 32

World Map page, 120, 124

WRL export, 190

X

X, Y, Z coordinates, 140

Z

Z 140

Zone (plant), 116

Zoom and Navigate toolbar, 11

Zoom Realtime, 22

Zoom to Fit, 22

Zoom Window, 22

Zooming 22

Zooming in and out, 22