

VectorWorks 12.0.1 Documentation Update

This documentation contains information on a several notable user interface updates since the release of VectorWorks 12.0.

New Features

The following table contains a list of new features and significant enhancements. When applicable, a full description of the feature is provided at the location indicated.

Note: This is a standalone documentation update. This material is not covered in the version 12 user's guides or help system. It will be fully integrated in a future release.

Feature	Purpose	Product	Location in this Update
Center snapping for regular polygons	Allows snapping to the center of closed, regular polygons	VectorWorks Fundamentals	“Center Snapping for Regular Polygons” on page 4-3
Viewport out-of-date indicator	The red dashed lines surrounding a viewport (representing an out-of-date viewport) no longer print	VectorWorks Fundamentals	Not applicable
Viewport and section viewport updating	Viewports and section viewports can now be updated at any time using the Update button on the Object Info palette (this puts control of updating in the hands of the user, rather than controlling it through the application)	VectorWorks Fundamentals (viewports); Architect, Landmark, Spotlight, and Machine Design (section viewports)	Not applicable
Auto-adjust exposure improvements	Changes to the auto-adjust exposure feature improve the rendering quality in Custom RenderWorks, Fast Radiosity, Final Quality Radiosity, and Custom Radiosity modes	RenderWorks	“RenderWorks Auto-exposure Revisions” on page 4-4
New cabinet parameters	Base, utility, and wall cabinets can now assign a style class for both the cabinet body and the cabinet doors	VectorWorks Fundamentals, Architect, Landmark, Spotlight, and Machine Design	Not applicable
Non-orthogonal projection of section viewports	Section viewports now support non-orthogonal projection	Architect, Landmark, Spotlight, Machine Design	“Displaying Section Viewports in Non-orthogonal Projection” on page 4-4

Feature	Purpose	Product	Location in this Update
New DTM parameters	New 2D and 3D triangulated display options are available, along with a related smoothing parameter	Architect, Landmark	“New DTM Parameters” on page 4-5
Objects from Polyline changes	Two additional objects are supported by the Objects from Polyline command, and custom path objects can now be added by the command	Architect, Landmark, Spotlight	“Objects from Polyline Changes” on page 4-7
Workspace changes	<p>The Import SketchUp command is now in the Architect, Landmark, and Spotlight workspaces</p> <p>The Align Layer Views command has been added back to the Standard, Spotlight, and Machine Design workspaces</p> <p>The Quarter Arc tool has been added back to the Standard workspace</p>	Various (see left)	“Workspace Changes” on page 4-10
Import SketchUp command	The Import SketchUp command was added after version 12 was released. A PDF of the SketchUp import functionality is also included in the version 12.0.1 release.	Architect, Landmark, Spotlight	See SketchUp.pdf
Repetitive Unit	<p>A new parameter has been added to the Repetitive Unit tool</p> <p>In addition, the repetitive unit offset path is now drawn in the object’s assigned line style (the path always has a fill style of None)</p>	Architect, Landmark	“New Parameter for Repetitive Unit” on page 4-12
Styled walls changes	Styled walls can now use class attributes and class textures	Architect, RenderWorks	“Class Attributes and Textures in Wall Styles” on page 4-12

Feature	Purpose	Product	Location in this Update
Window and door enhancements	<p>A number of new or revised parameters are available:</p> <ul style="list-style-type: none"> • Additional commonly-used parameters now display in the Object Info palette • Window and door detail and view parameters are renamed for clarity or localization purposes • New user-defined fields are available for storing additional window and door information • A new bubble size parameter displays in the ID Settings dialog box • Astragal is now included in the part list for assigning 2D line styles to the astragal independently from the object line style • Windows and doors convert with greater fidelity from previous VectorWorks versions 	Architect	“Window and Door Enhancements” on page 4-14
Using image props as 3D plant symbols	Image props of plant objects, including those provided by Xfrog™, can now be used as 3D plant symbols	Landmark	“Using Image Props as 3D Plant Symbols” on page 4-17
Properly oriented lighting devices	Mirrored lighting devices now maintain a proper rotation and beams draw correctly	Spotlight	“Properly-rotated Lighting Devices” on page 4-17
New lighting device parameters	New Brightness and Lit Fog parameters are available	Spotlight, RenderWorks	“New Lighting Device Parameters” on page 4-17

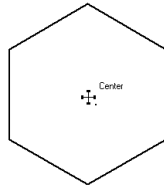
Center Snapping for Regular Polygons

Product: VectorWorks Fundamentals

VectorWorks now provides the ability to snap to the center of a closed, regular (equal sided) polygon. The polygon can be either filled or unfilled. The SmartCursor™ cue displays the word Center when the cursor is placed on the center point of the polygon.



See “SmartCursor Cues” on page 4-9 and “Regular (Equal-sided) Polygon” on page 6-39 in the VectorWorks Fundamentals User’s Guide for details on SmartCursor cues and creating regular polygons.



RenderWorks Auto-exposure Revisions

Product: RenderWorks

The Custom RenderWorks and Custom Radiosity rendering modes have an **Auto-Adjust Exposure** option. When this option is enabled, RenderWorks automatically adjusts the exposure when rendering scenes with too much illumination. Fast Radiosity and Final Quality Radiosity modes always use the auto-adjust exposure feature.

The following improvements have been made to the auto-adjust exposure feature.

- Renderings are now brighter; they were sometimes too dark in the previous version.
- Luminance levels have been adjusted to maximize contrast.
- Locating translucent surfaces close to light sources no longer causes the rendering to become dark. Using translucent shaders rather than constant shaders with light sources is recommended, since constant shaders are limited in the brightness they can show.
- Lit fog no longer causes the rendering to become dark.
- A rendering's brightness is no longer affected by the amount of background shown in it.

Displaying Section Viewports in Non-orthogonal Projection

Product: Architect, Landmark, Spotlight, and Machine Design

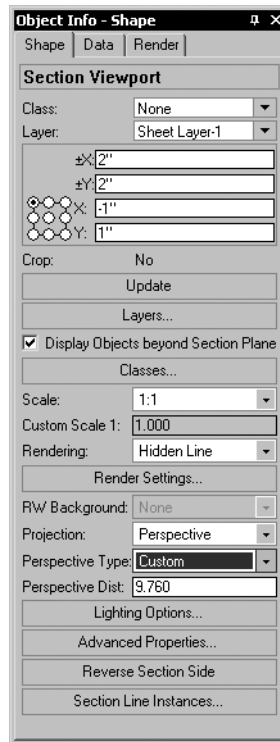
A section viewport can now be displayed in a non-orthogonal projection (perspective, cabinet, and cavalier) for straight section lines.

1. Select a section viewport.



See “Creating a Section Viewport” on page 22-1 in the [VectorWorks Design Series User's Guide](#) for details on creating section a viewport.

2. Select the desired projection in the Object Info palette. If a perspective projection is selected, a perspective type and custom perspective distance can also be specified.




Parameter	Description
Projection	Select the projection type for the section viewport (see “Projection” on page 13-3 in the VectorWorks Fundamentals User’s Guide)
Perspective Type	For Perspective projection, select the type of perspective, or choose Custom and specify the perspective distance
Perspective Dist	For custom perspectives, enter the perspective distance

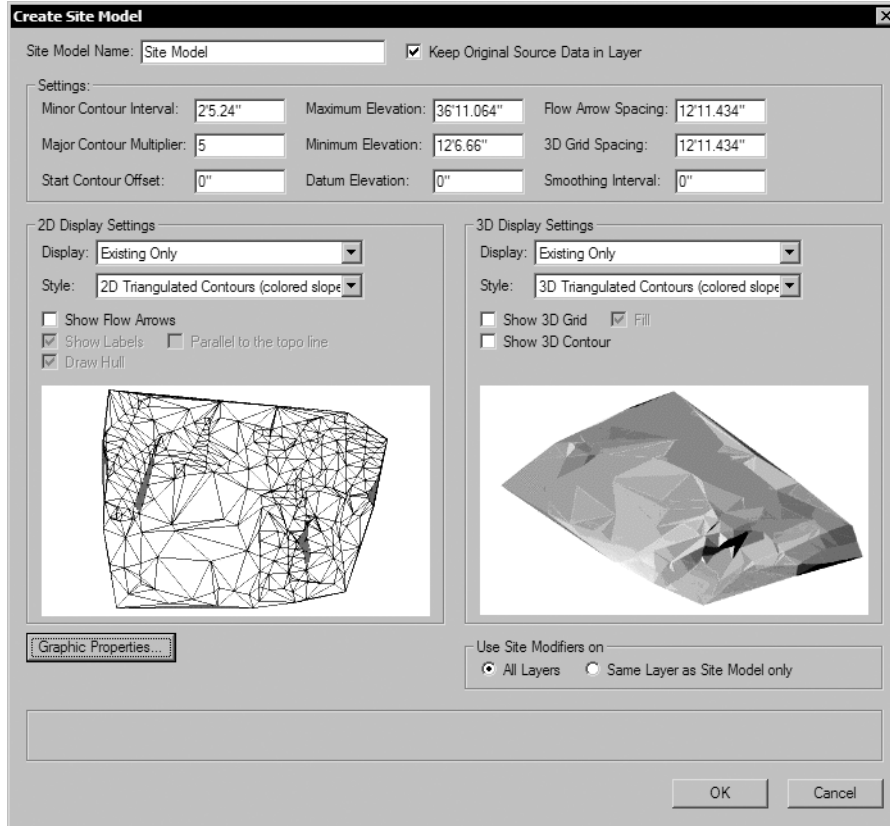
New DTM Parameters

Product: Architect and Landmark

A new parameter, **Smoothing Interval**, and new 2D and 3D triangulated contour display styles have been added to the site model display options, which are available when creating a new site model with the **Create Site Model** command, or when editing a selected site model by clicking **Site Model Settings** from the Object Info palette. The order of parameters in the dialog box has changed slightly to accommodate the new parameter.

The new 2D and 3D display options are also available for a selected site model from the Object Info palette.

 For more information on the Create Site Model or Site Model Settings dialog box, see “Creating the Site Model” on page 9-8 in the VectorWorks Design Series User’s Guide.



Parameter	Description
Smoothing Interval	When selecting a triangulation method for 2D and/or 3D site model display, sets the distance for adding new points to the contours. Enter zero to use the original contour points for triangulation.
2D Display Style	Two new 2D display styles are available
2D Triangulated Contours	Draws 2D contour lines by triangulation, according to the specified Smoothing Interval
2D Triangulated Contours (colored slopes)	Draws 2D contour lines by triangulation, according to the specified Smoothing Interval , and colors the slopes within specified angle ranges for conducting a slope analysis
3D Display Style	Three new 3D display styles are available
3D Triangles (colored slopes)	Generates 3D triangles with the Triangulated Irregular Network (TIN) method, and colors the slopes within specified angle ranges for conducting a slope analysis

Parameter	Description
3D Triangulated Contours	Draws 3D contour lines by triangulation, according to the specified Smoothing Interval
3D Triangulated Contours (colored slopes)	Draws 3D contour lines by triangulation, according to the specified Smoothing Interval , and colors the slopes within specified angle ranges for conducting a slope analysis

Objects from Polyline Changes

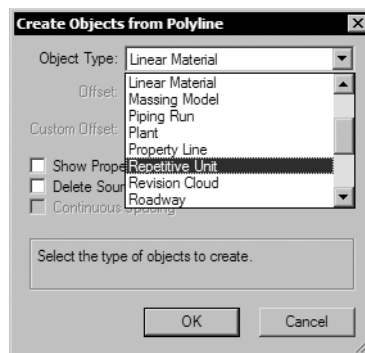
Two new objects are supported by the **Objects from Polyline** command, and the ability to use the command with custom objects is now supported.

 For more information on the **Objects from Polyline** command, see “Creating Objects from Polylines” on page 22-41 in the *VectorWorks Design Series User’s Guide*.

New Objects Supported

Product: Architect and Landmark

The **Objects from Polyline** command, located on the **Modify > Convert** menu, now supports both Repetitive Unit and Linear Material objects.



 For more information on these objects, see “Detail Drawings” on page 8-16 in the *VectorWorks Design Series User’s Guide*.

Custom Path Objects

Product: Architect, Landmark, and Spotlight

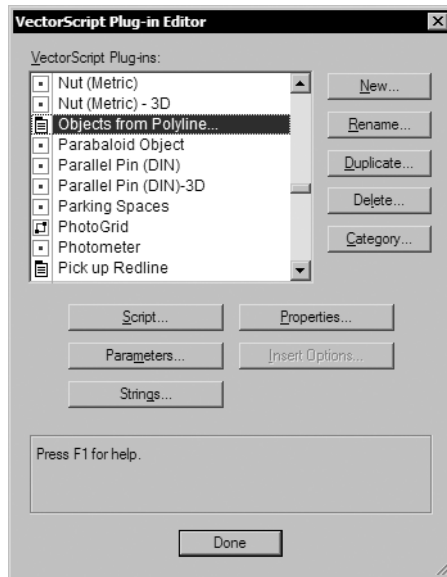
The **Objects from Polyline** command now supports custom path objects (custom path plug-in objects with a .vso extension).

 For information on creating custom path objects, see “VectorScript Objects” on page 13-1 in the *VectorScript Language Guide*.

To add a custom path object to the **Objects from Polyline** command:

1. Place the custom path object file in the VectorWorks\Plug-Ins folder.
2. Select **Tools > Scripts > VectorScript Plug-in Editor**.

The VectorScript Plug-in Editor dialog box opens.

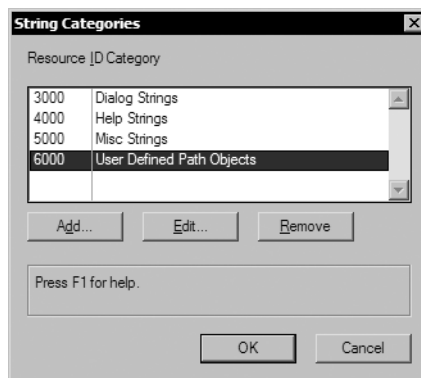


3. In the list of VectorScript plug-ins, select **Objects from Polyline**.

 **Press the letter O key to quickly access the Objects from Polyline plug-in.**

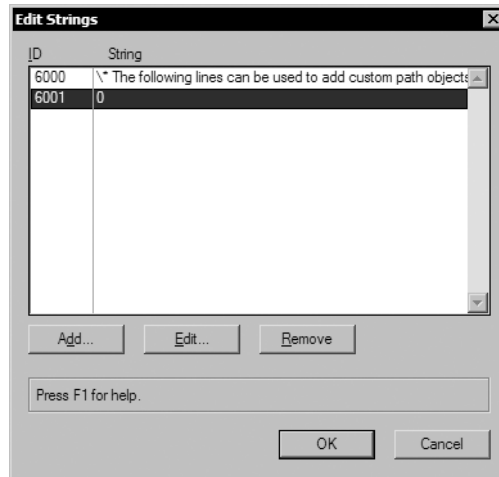
4. Click **Strings**.

The String Categories dialog box opens.

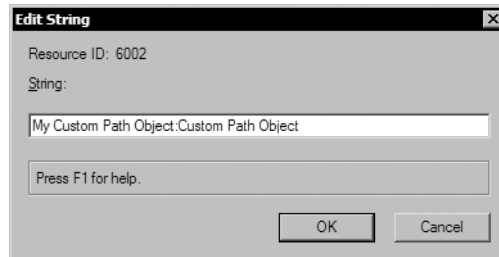


5. Select Resource ID 6000, **User Defined Path Objects**, and click **Edit**.

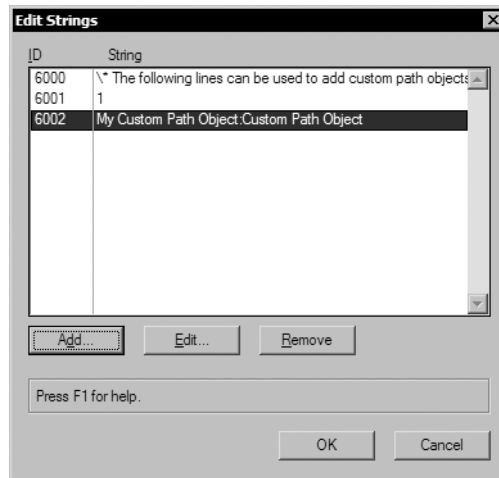
The Edit Strings dialog box opens.



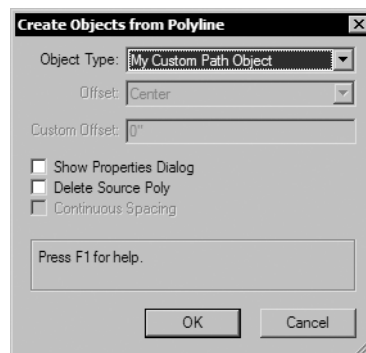
6. Select ID 6001, and click **Edit**.
7. The Edit String dialog box opens.
Enter the number of custom path objects that will be added, and click **OK**. (If adding one path object, enter 1.)
8. In the Edit Strings dialog box, click **Add**.
The Edit String dialog box opens.



9. Enter the name of the path object that should be used in the command list, and then the actual name of the plug-in object file (without the .vso extension), separated by a colon.
10. Click **OK** to return to the Edit Strings dialog box.
The custom path object ID and string are listed.



11. Repeat steps 8 – 10 for each custom path plug-in object to add.
12. Click **OK** twice, and then **Done**, to exit the VectorScript Plug-In Editor.
13. The custom path object is included in the list of path objects created by the **Objects from Polyline** command.



Workspace Changes

Importing SketchUp Files

Product: Architect, Landmark, and Spotlight

The **Import SketchUp** command is now located in the **File > Import** menu in the Architect, Landmark, and Spotlight workspaces. See the SketchUp.pdf included with this release for more information.

Aligning Layer Views

Product: VectorWorks Fundamentals, Spotlight, and Machine Design

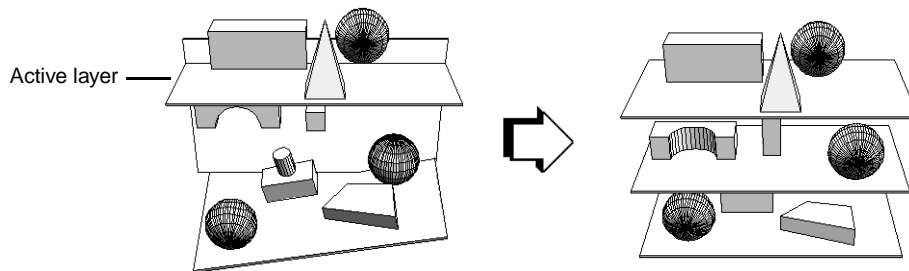
The **Align Layer Views** command has been added back to the Standard, Spotlight, and Machine Design workspaces.

The **Align Layer Views** command provides a one-step way to change all the design layers in the drawing file so that they have identical Standard View and Projection modes. VectorWorks matches all design layers, regardless of visibility, to the Standard View and Projection modes of the active layer.

To align design layer views:

1. Select **View**, and then set the Standard Views and Projection modes for the active layer.
2. Select **View > Align Layer Views**.

VectorWorks changes the Standard Views and Projection modes for all of the design layers in the drawing file.



Creating Quarter Arcs

Product: VectorWorks Fundamentals

The **Quarter Arc** tool has been added back to the Standard workspace.

The **Quarter Arc** tool creates circular 90° arcs or 90° elliptical arc polyline objects.

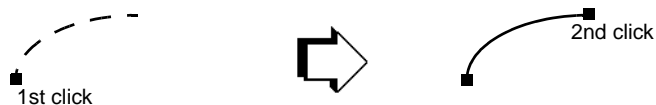
Note: Quarter arcs are listed as polylines in the Object Info palette.

To create quarter arcs:

1. Click the **Quarter Arc** tool from the Basic palette.
2. Click at the start point for the arc.
3. Click at the end point for the arc.

Note: The ratio of the arc's height to its width displays in the Data Display bar (a quarter arc for a circle has a ratio of 1.000).

Use the Data Display bar to verify or modify an arc's angle, length, and location in a drawing.



New Parameter for Repetitive Unit

Product: Architect and Landmark

The **Repetitive Unit** tool draws world-scale symbols along a path, creating repetitive elements such as masonry units, shingles, and siding.



See “Creating Repetitive Unit Details” on page 8-19 in the VectorWorks Design Series User’s Guide.

A new parameter, **Use Vertical Pitch**, has been added.

Parameter	Description
Use Vertical Pitch	Rotates the symbol 90 degrees counter-clockwise and sets the pitch vertically; this is useful for symbols that are to be stacked vertically rather than arrayed vertically, as they can be drawn in a more natural way

Class Attributes and Textures in Wall Styles

Product: Architect

Wall styles can now use class attributes and class textures. This allows viewport class overrides to apply to styled walls, and eliminates the concept of wall style default textures.



For more information on wall styles, see “Creating Walls in Architect” on page 5-1 in the VectorWorks Design Series User’s Guide.

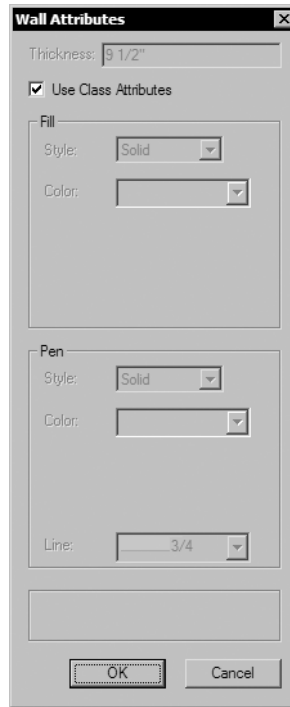
Using Wall Style Class Attributes

Product: Architect

A new option, **Use Class Attributes**, sets the wall attributes of styled walls by class rather than in the Wall Attributes dialog box. When a styled wall is created with that wall style, its wall fill and pen attributes are set by the wall’s class. If the wall class is changed later, the wall changes to use the attributes of the new class. Wall attributes cannot be overridden on a per-instance basis; if a wall style uses class attributes, all walls of that style must use class attributes. However, walls of the same wall style can be placed in different classes.

To use class attributes for a wall style:

1. Either click the **Wall Preferences** mode button, or select a wall style in the Resource Browser and select **Edit** from the Resources menu.
2. The Wall Preferences or Edit Wall Style dialog box opens.
3. On the Wall Definition tab, select Wall from the Wall Structure List. Click **Edit**.
The Wall Attributes dialog box opens.



4. Select **Use Class Attributes** to set the styled wall attributes by class. The wall's fill and pen attributes can no longer be set from this dialog box, since they are applied by class.
5. Click **OK**.

Using Wall Style Class Textures

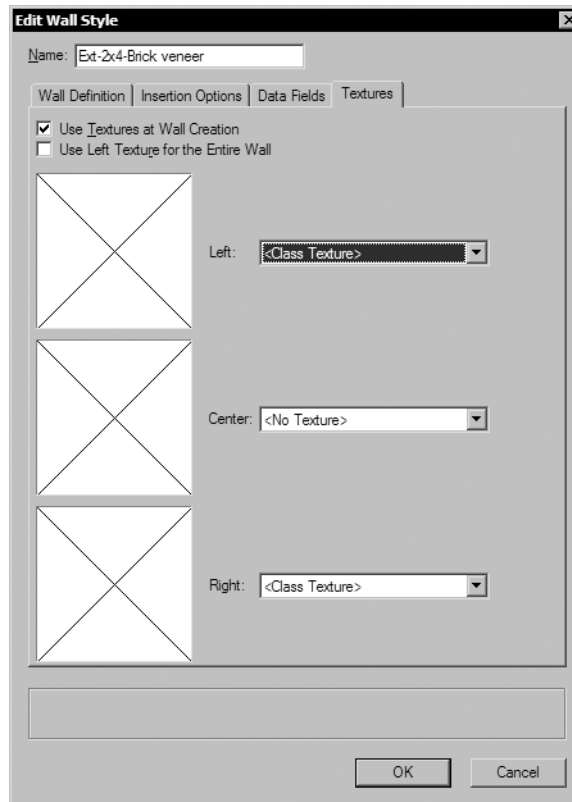
Product: Architect and RenderWorks

Wall styles can now use class textures by selecting Class Texture for the left, center, or right portion of the wall (RenderWorks required). Any walls with that wall style use class textures for that part of the wall (unless overridden). On the Render tab of the Object Info palette for a selected wall, default wall style textures are no longer present; like un-styled walls, class textures are available.

To select class textures for styled walls:

1. Either click the **Wall Preferences** mode button, or select a wall style in the Resource Browser and select **Edit** from the Resources menu.

The Wall Preferences or Edit Wall Style dialog box opens. Click the Textures tab.



- For each section of the wall where a texture is defined, select Class Texture to use the texture defined by the wall's class.

Class Texture can also be chosen for a selected wall in the Render tab of the Object Info palette.

Window and Door Enhancements

Product: Architect

A number of new parameters are available for windows and doors, a few parameters were renamed for clarity or localization purposes, and the Object Info palette now contains additional commonly-used parameters for easier window and door editing.

Additional Object Info Palette Parameters

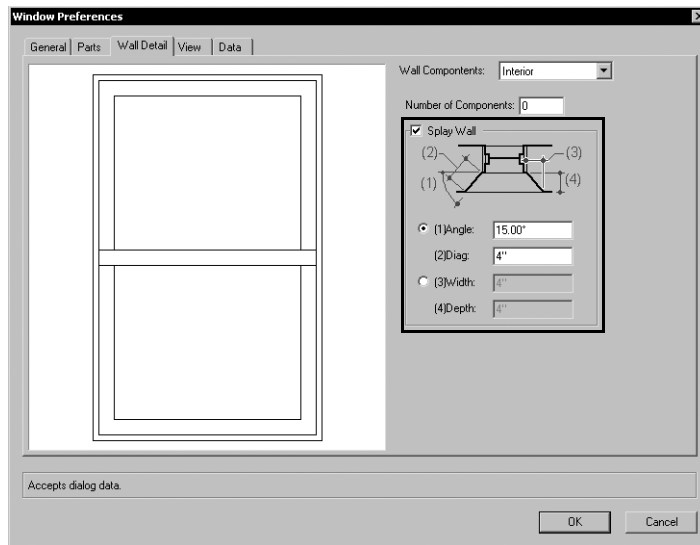
Additional commonly-used parameters now display on the Object Info palette for easier editing. For a black symbol made from a window or door object, fields pertaining to geometry do not display. New parameters include the following:

- See “Inserting Windows” on page 6-1 and “Inserting Doors” on page 6-11 in the VectorWorks Design Series User’s Guide for a description of the parameters now displaying on the Object Info palette.

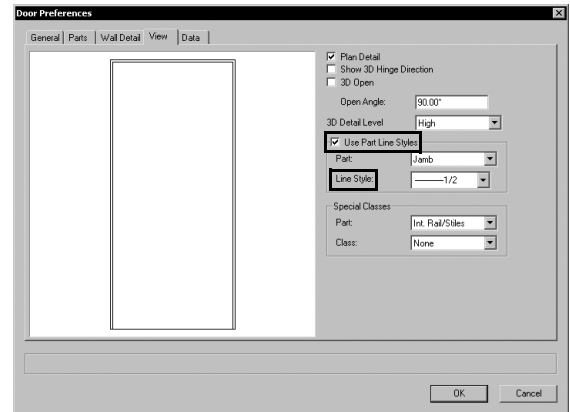
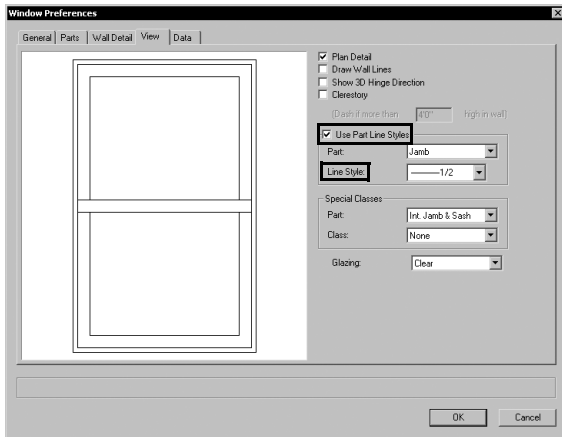
Parameters		
• Use Wall Depth	• Draw Wall Lines (window object only)	• Plan Detail
• Show Hinge Direction (window object only)	• Show 3D Open and Angle (door object only)	• Include Interior / Exterior Trim, Width, and Thickness
• Trim Under Stool (window object only)	• Trim Under Sill (window object only)	• Interior/Exterior Comps
• Use Part Line Styles	• On Schedule	• ID Prefix
• ID Label	• ID Suffix	• ID Label Size

Renamed Wall Detail and View Parameters

The splay wall parameters on the Wall Detail tab of the Window and Door Preferences dialog boxes have been renamed for localization purposes.




The line weights parameters on the View tab of the Window and Door Preferences dialog boxes have been renamed to more accurately represent their purpose.



User-defined Record Parameters

New fields are available for storing additional window and door information. Click the Data tab of the Window and Door Preferences dialog boxes to specify the record information to include on the window or door schedule. **User Field 1** to **User Field 9** (or **User Field 10** for doors) can be used to include additional user-defined window or door information.

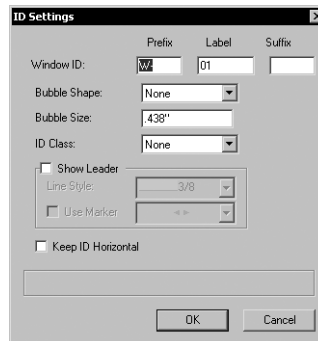
 See “Inserting Windows” on page 6-1 and “Inserting Doors” on page 6-11 in the VectorWorks Design Series User’s Guide.

New Bubble Size Parameter

The **Bubble Size** parameter now displays in the ID Settings dialog box.

1. From the Data tab of the Window or Door Preferences dialog boxes, click **ID Settings**.

The ID Settings dialog box opens for specifying ID label parameters.



Parameter	Description
Bubble Size	Specify the size of the ID label bubble (this value represents the bubble size times the layer scale; the bubble shape is maintained relative to the text inside it for ID bubble uniformity throughout the drawing file)



See “Modifying the Window or Door ID Label” on page 6-24 in the [VectorWorks Design Series User’s Guide](#) for a description of the other ID label parameters.

2. Click **OK** to close the ID Settings dialog box and return to the Window or Door Preferences dialog box.

New Astragal Parameter for Doors

The View tab of the Door Preferences dialog box now includes astragal in the part list for assigning 2D line styles to the astragal independently from the object line style.

Using Image Props as 3D Plant Symbols

Product: Landmark

Image props, including those provided by Xfrog™, can now be assigned as 3D plant symbols. Several default resource image props are provided in [VectorWorks]\Libraries\Defaults\Plants - 3D Symbols\3DPlantSymbols.mcd. Custom default resources can also be created from image props. Once the image props are in the correct location, they may be selected from the **3D Symbol** preview in the New Plant Definition dialog box.



See “VectorWorks Fundamentals Default Resources” on page 5-1 in the [VectorWorks Fundamentals User’s Guide](#); also see “Defining Plants” on page 11-2 and “Plant Symbol Specifications” on page A-15 in the [VectorWorks Design Series User’s Guide](#).

Lighting Device Changes

Properly-rotated Lighting Devices

Product: Spotlight

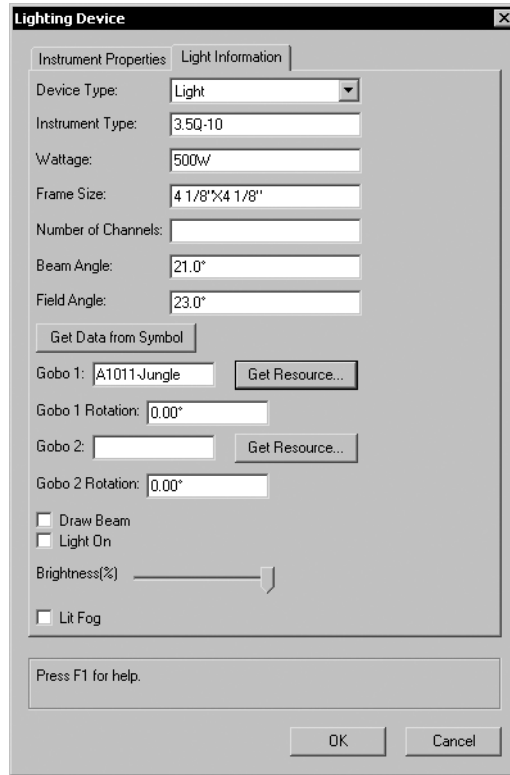
Mirrored lighting devices maintain their proper rotation and beams are drawn properly for flipped or mirrored lighting devices. Files converted from version 11 are automatically updated. Lighting devices in version 12 files must be updated. To do so, open a version 12 file containing lighting devices. With nothing selected, select **Modify > Refresh Instruments**. All lighting devices in the current file are updated.

New Lighting Device Parameters

Product: Spotlight and RenderWorks

Two new parameters are available on the Light Information tab of the Lighting Device dialog box and also on the Object Info palette for a selected lighting device. To access the Lighting Device dialog box,

double-click a lighting device in the drawing, or select a lighting device and click **Edit** in the Object Info palette. The Lighting Device dialog box opens.



Parameter	Description
Brightness (%)	Controls the intensity of the light inside the lighting device; drag the slider to the right to increase the light intensity. In the Object Info palette, enter a numerical brightness percentage value.
Lit Fog (RenderWorks required)	Enables the lit fog weather effect; see “Creating Weather Effects” on page 21-24 in the VectorWorks Fundamentals User’s Guide

 See “Lighting Instrument Properties” on page 13-3 and “Changing Instrument Properties” on page 13-8 in the VectorWorks Design Series User’s Guide for a description of the other light information parameters.