



This newsletter is designed to work as an on-line user group. It is based on the successful New Zealand VectorWorks User Group format, where each month we cover a main topic in a workshop then have a page of general questions and answers. In this news letter you will find a link to the workshop topic, a link to the questions and answers and links to extended podcasts (tips and trick movies).

### Workshop Topic

#### **Dealing with Roofs**

Roofs for standard houses are easy, but what if you don't want a standard roof. This workshop will cover how to create a standard roof, how to edit a standard roof and what yo do when the standard roof won't do what you want.

### Q & A

#### **How can I use an iPod as a backup device?**

I've told a lot of people that they should get an iPod. You can use it for back-up and storage. So which iPod should you get and how do you set it up for storage.

### Extended Podcast 046

VectorWorks 2008 has a new plan view, the Rotated Plan view. This is a long requested feature and should be really useful for buildings that have wings at different angles..

### Extended Podcast 047

The Stacked layers view looks like it gets rid of the need to use layer linking. I think it is a useful feature, but you still to learn layer linking.

# Dealing With Roofs

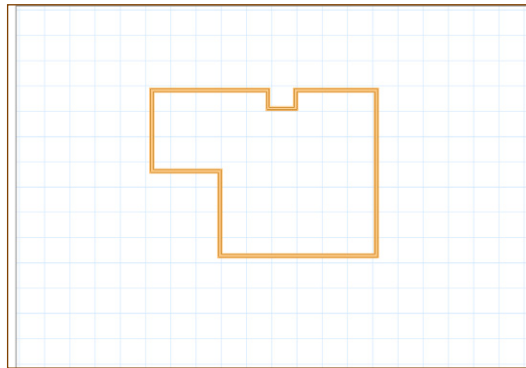
## Creating Roofs

[cadmovie083](#)

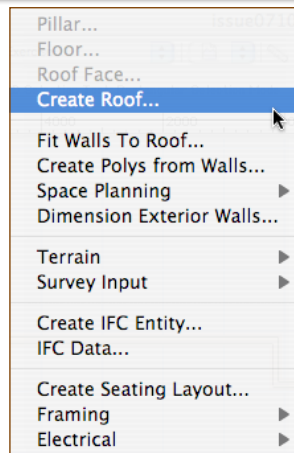
There are two main ways to create roofs:

1. Creating a roof from selected walls;
2. Creating a roof from a selected polygon.

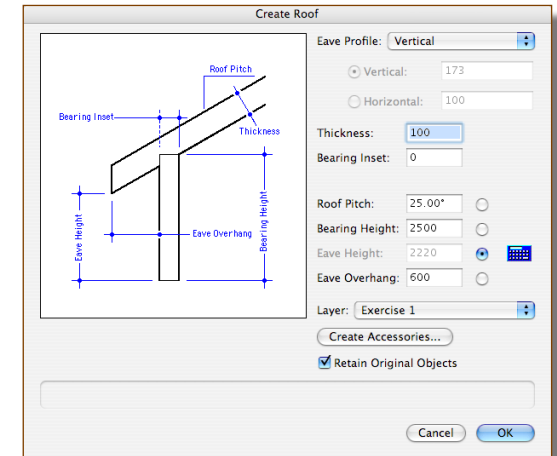
- Open a file with walls.
- Select all the walls.



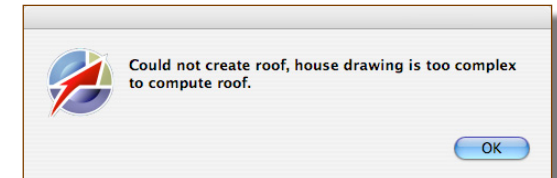
- Go to the Menu Bar.
- Choose **AEC > Create Roof...**  
(If you are using the standard workspace use Model > AEC > Create Roof...)



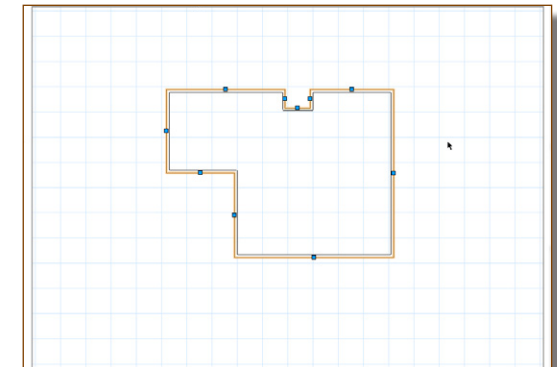
- Fill in the details for the roof.
- Note, if the roof overhang is too big, VectorWorks will have trouble making the roof.
- Click on the **OK** button.



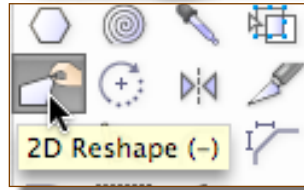
- Here is the warning that the roof is in trouble.
- Click on the **OK** button.



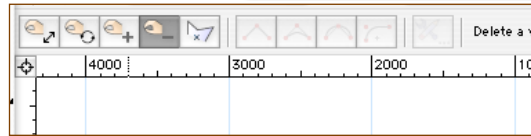
- This is what you get if the roof doesn't work for you. It is not a disaster to have the roof end up like this. You can still save it.



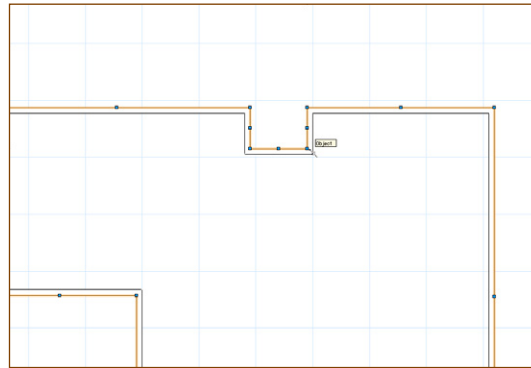
- Go to the Basic tool set.
- Select the 2D Reshape tool.



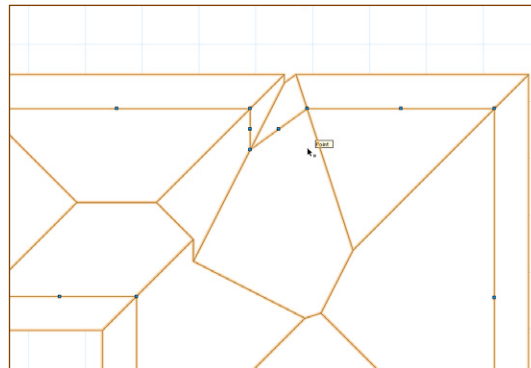
- Go to the Mode bar.
- Click on the 4th mode.



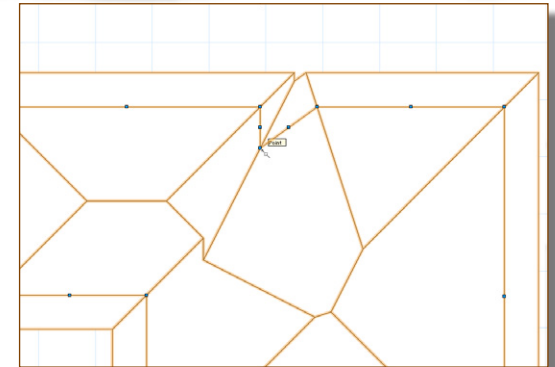
- Move to a handle on the roof that you want to delete.



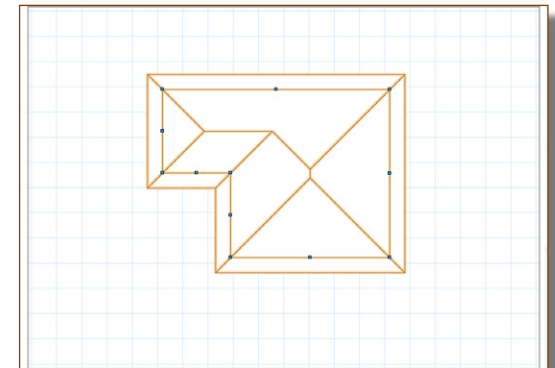
- Click once. VectorWorks will recalculate the roof.



- Move to the next handle on the roof that you want to delete.
- Click once.



- Now you have a decent roof.



The other method is to create a polygon that it is the correct shape for the roof. You can use that to create the roof from. It saves the editing after the roof creation.

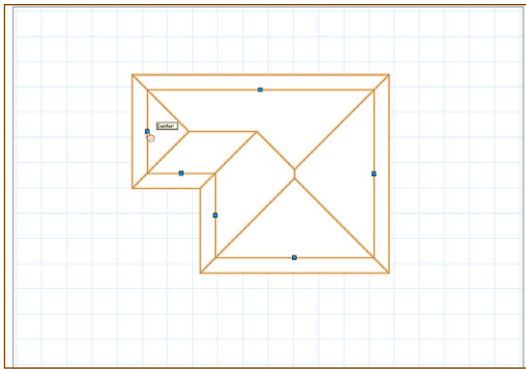
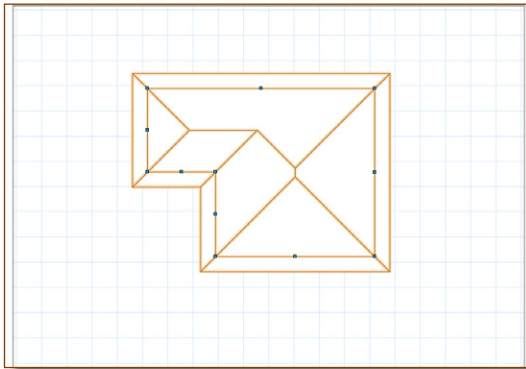
## Editing Roofs

[cadmovie084](#)

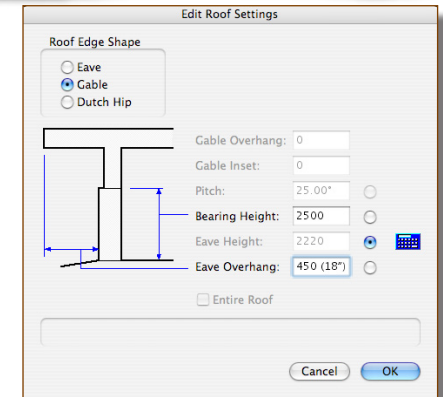
### Gable Roof

Once a roof is created you can edit parameters of the roof, roof plane by roof plane if you want, or the entire roof. We are going to create a split gable roof using the standard roof command, and some simple editing.

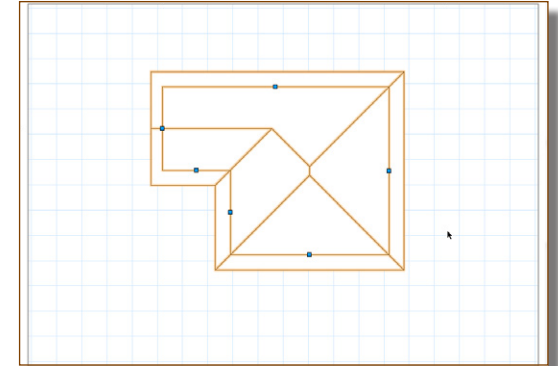
- Select the roof using the 2D Selection tool.
- When you create a roof the result is always a hip roof but we want a split gable.
- With the 2D Selection tool move the cursor over the handle at the right hand side of the roof.
- When you do, the cursor will change into a hand.



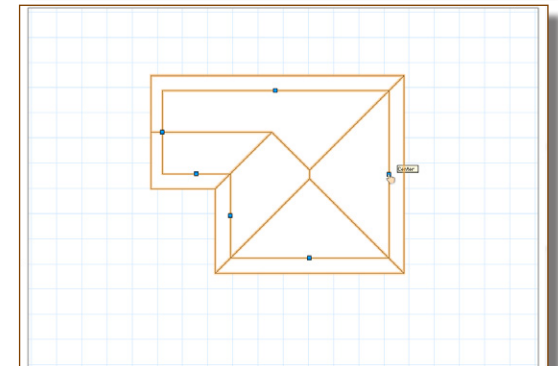
- Click on the handle to open the Edit Roof dialog box.
- Click on the **Gable** radio button.
- Fill in the settings that you want.
- Click on the **OK** button.



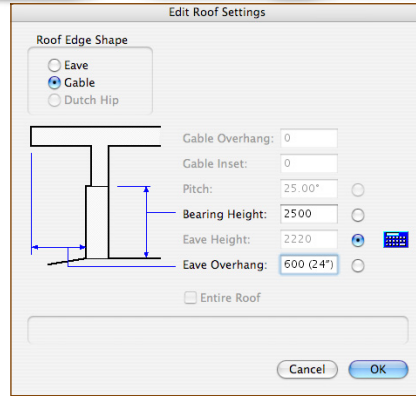
- The result is a gable end.



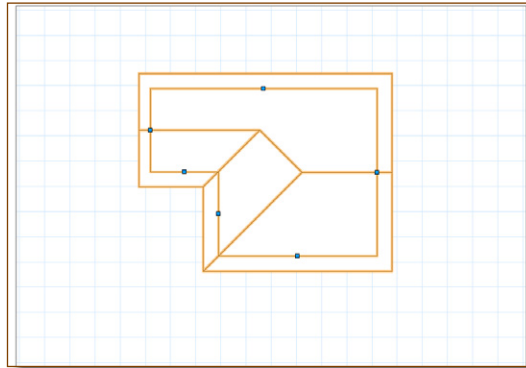
- With the 2D Selection tool move the cursor over the handle on the far left hand side of the roof.



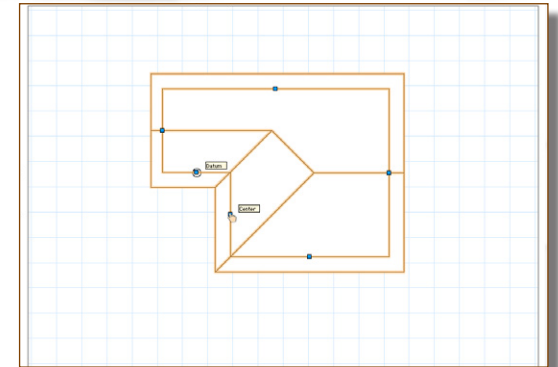
- Click on the handle to open the Edit Roof dialog box.
- Click on the **Gable** radio button.
- Fill in the settings that you want.
- Click on the **OK** button.



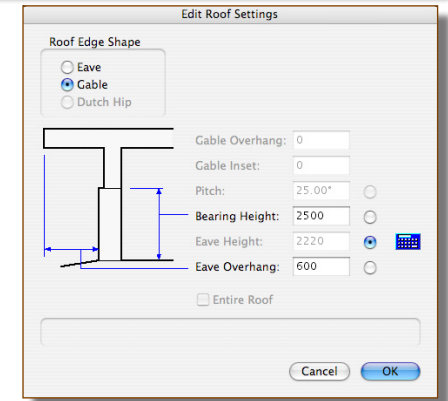
- Now you a gable roof.



- With the 2D Selection tool move the cursor over the handle on the left hand roof face. When you do this, the cursor will change into a hand.
- Click on the handle to open the Edit Roof dialog box.



- Click on the **Gable** radio button.
- Click on the **OK** button.

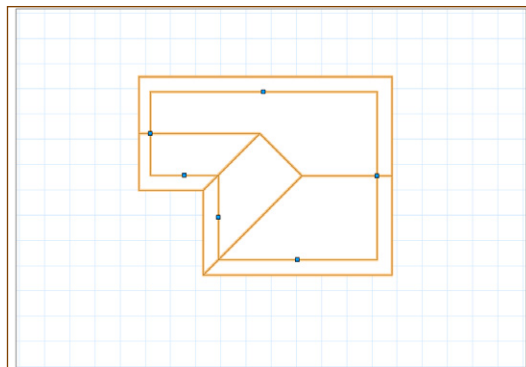


### Split Gable

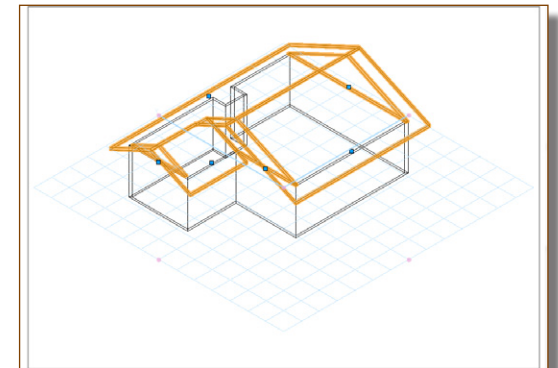
[cadmovie085](#)

We are going to create a split gable roof using the standard roof command, and some simple editing.

- Select the roof using the 2D Selection tool.



- VectorWorks has created the split gable roof.

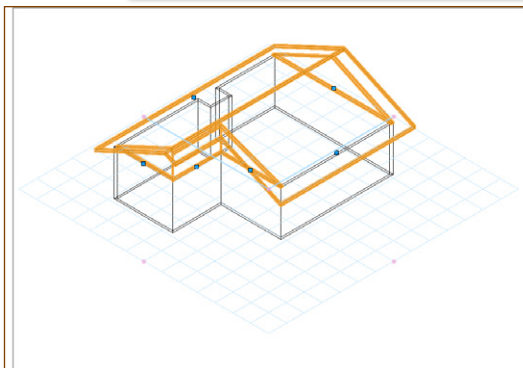
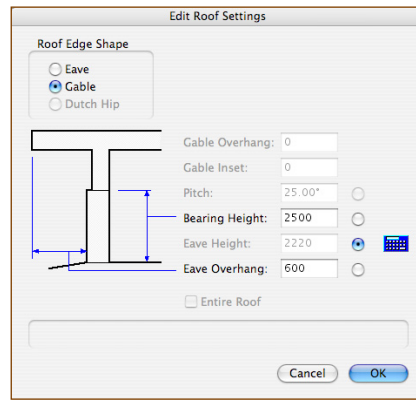
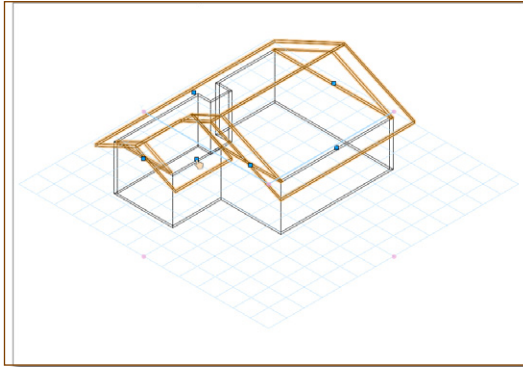


## One Gable

[cadmovie086](#)

We can continue to edit our roof further. You can edit the roof in 2D or in 3D.

- With the 2D Selection tool move the cursor over the handle on the left hand roof face. When you do this, the cursor will change into a hand.
- Click on the handle to open the Edit Roof dialog box.
- Click on the **Gable** radio button.
- Click on the **OK** button.



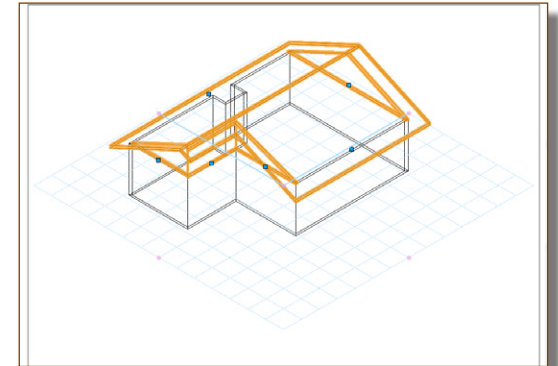
- You can see the roof in 3D.

## Mono Pitch Roof

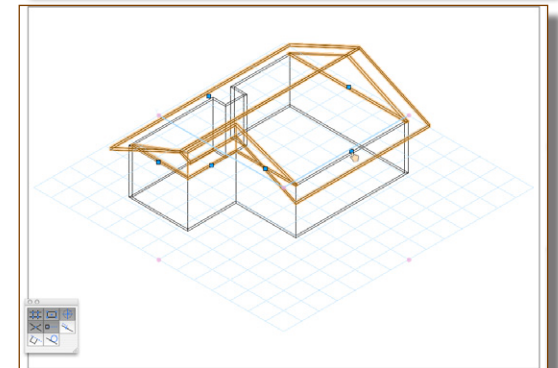
[cadmovie087](#)

A mono pitch roof is popular at the moment. Surprisingly, you can keep the roof as a standard VectorWorks roof.

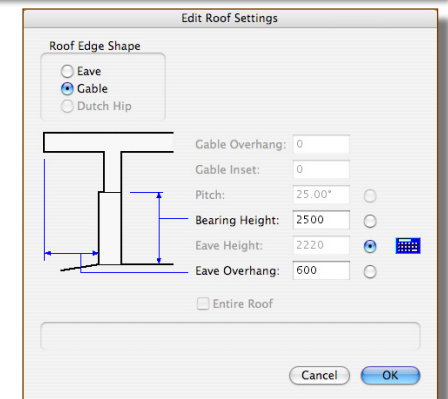
- Select the roof using the 2D Selection tool.



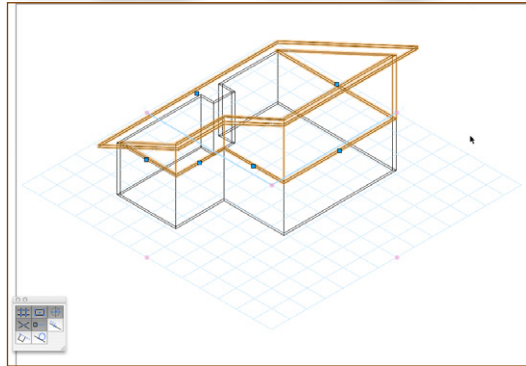
- Move to the roof handle at the bottom right.
- Click once.



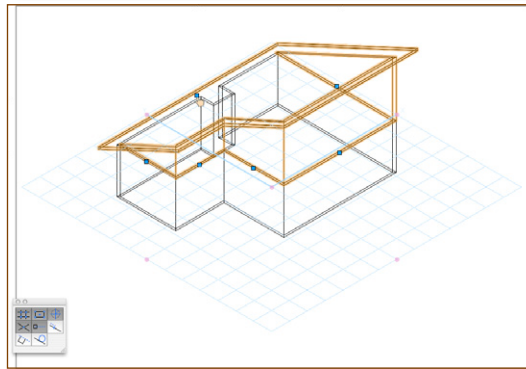
- Click on the **Gable** radio button.
- Click on the **OK** button.



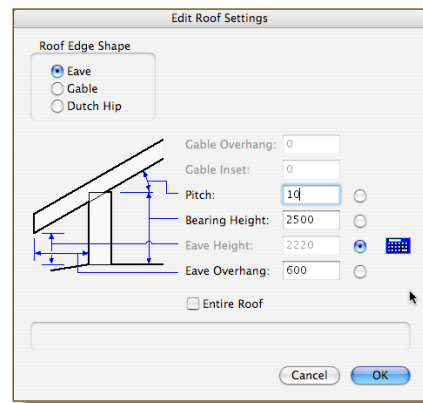
- This makes a mono-pitch roof.



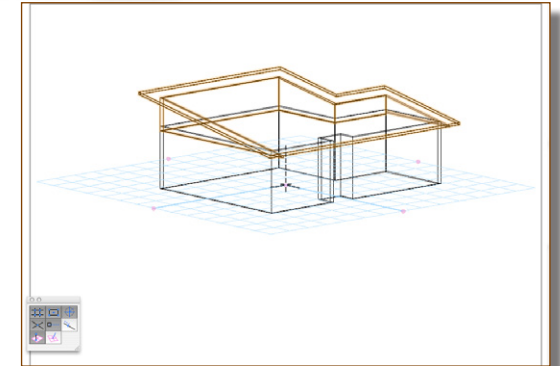
- Move to the handle at the last eave, the one at the top left.
- Click once.



- Change the roof angle.
- Click on the **OK** button.



- This roof has gable end walls under it. You can leave them if you want.
- I prefer to remove the gable end walls. They are controlled by the Object Info Palette.



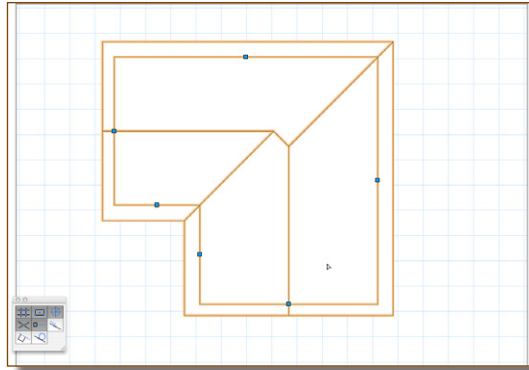
- Use the Object Info Palette to turn off the gable end walls. Use the Fit Walls to Roof... command to extend your walls up to the roof.

## How To Insert a Dormer Window

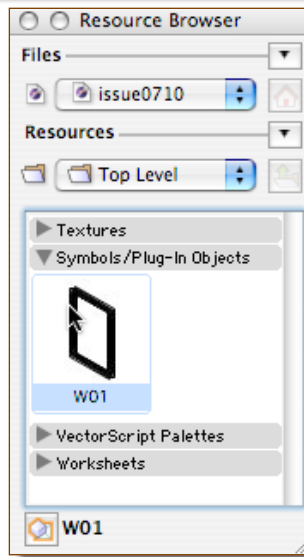
To insert a dormer window you need to create the roof first and you need a window or door symbol to insert. You cannot use a plug-in object like a simple window to create a dormer. You can however use the simple window plug-in to create the symbol.

[cadmovie088](#)

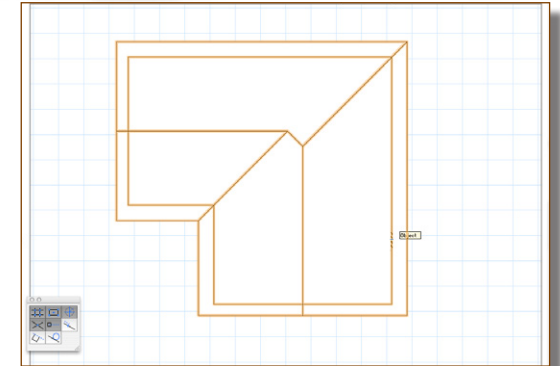
- You need a file with a roof and a window symbol. The window has to be a symbol to use it as a dormer window.



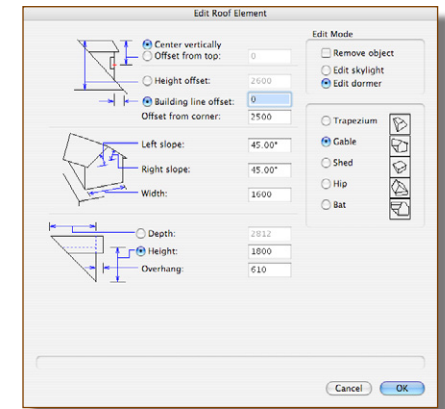
- On the Resource Browser find the window symbol.
- Double click on the window symbol.



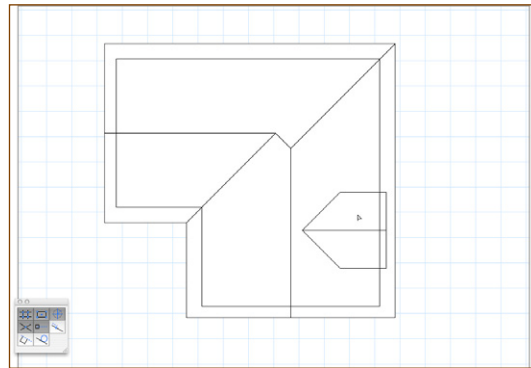
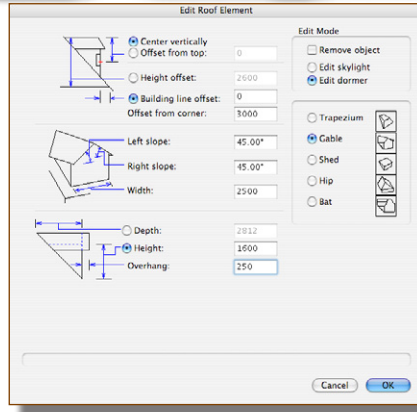
- Move your cursor over to your roof where you want the dormer window.
- Click once.



- This will open the Edit Roof Element dialog box.
- Choose the type of dormer that you want to use. In this case we have chosen the gable dormer.

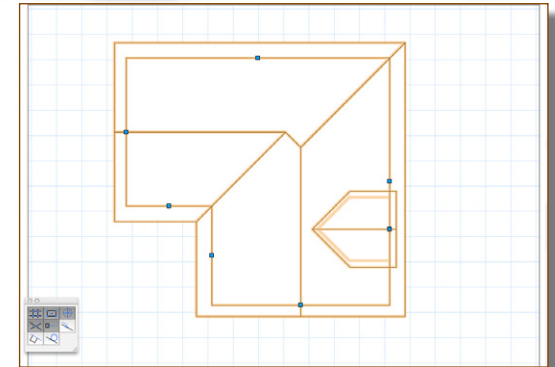


- Use the 'Offset From Top' radio button to accurately control where you want the centre of your window or door symbol to be in the wall.
- The building line offset is used to control the position wall containing the dormer window in relation to the wall or polygon that you used to create the roof. This should be set to zero or '0' if you want to line up with the walls below.
- Note that by default the left slope and the right slope of the dormer are at 45°.
- The roof thickness of the dormer window is controlled by the Object Info Palette. Change these later.
- When you are happy about the parameters, you can click on the **OK** button to close the dialog box.

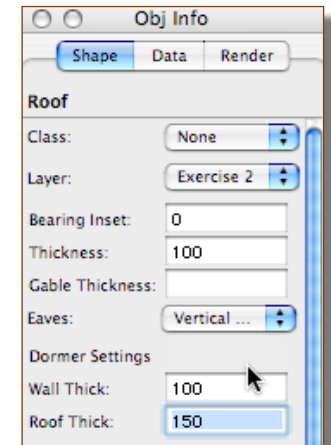


- VectorWorks makes your dormer window.

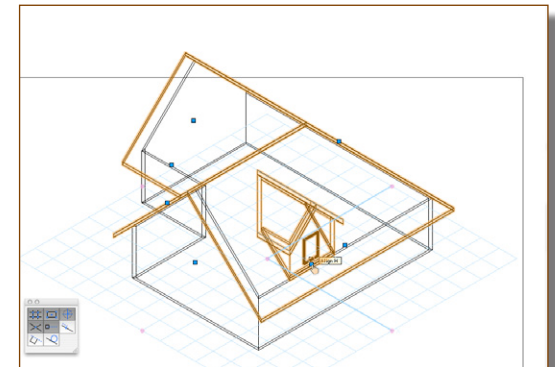
- When you select the roof you get blue selection handles on each roof face and at the bottom centre of each dormer.



- The Object Info Palette controls the dormer roof thickness and dormer roof wall thickness.
- Edit the wall thickness and roof thickness to suit your construction.

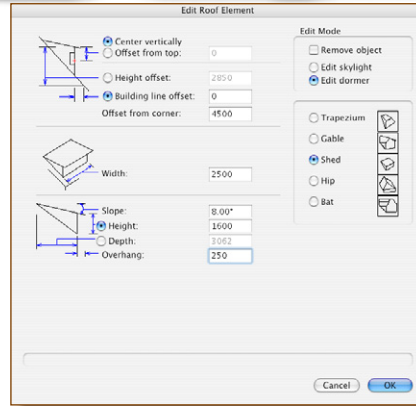


- To edit a dormer window, click on the handle at the bottom centre of the dormer window.

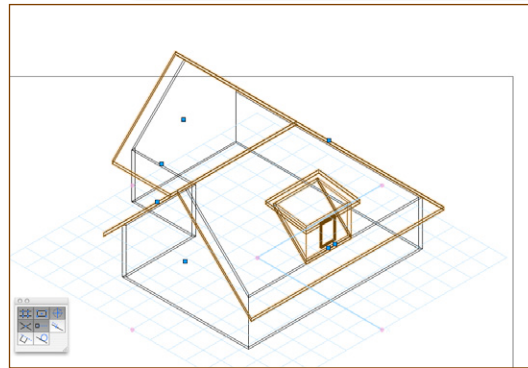


- This will open the Edit Roof Element dialog box.

Change the parameters that you want to and then click OK.

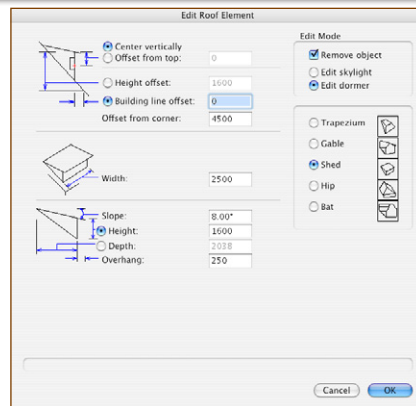


- You will be taken back to your drawing and the changes you made will be applied to the dormer and roof.



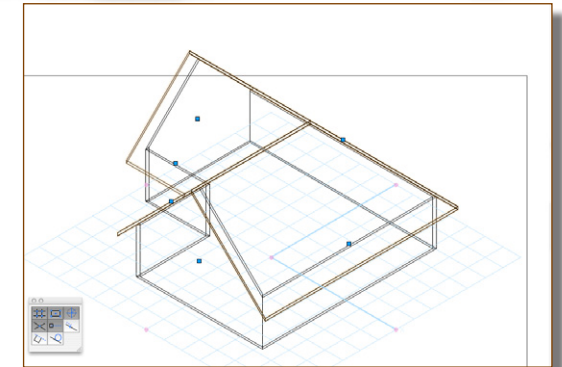
- To delete a dormer window that has been placed, move your cursor on top of the handle for the dormer that you want to edit and click once.

- This will open the Edit Roof Element dialog box.



- Click on the **Remove Object** check box and then click OK.

- You are returned to the drawing area and the roof is regenerated, and the dormer window is deleted from the roof.



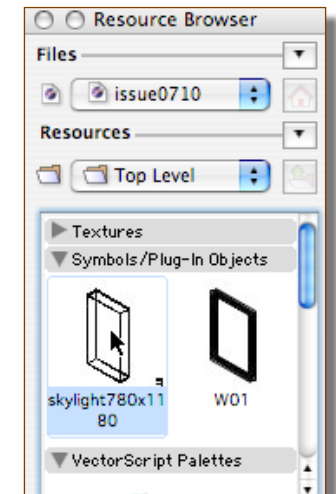
### How to Insert a Skylight

Putting in a skylight is similar to putting in a dormer window. To place a skylight you need to create a skylight symbol. The way that you create the skylight is crucial to the way it inserts into the roof.

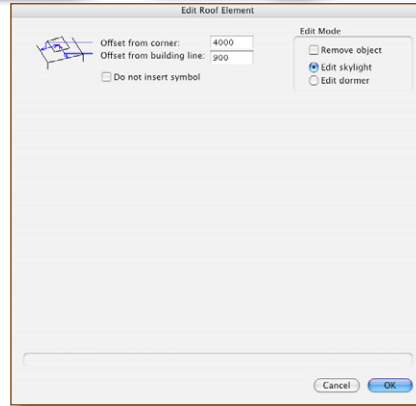
When you create a symbol for the skylight the insertion point of the 3D Symbol is used to relate the skylight to the face of the roof. The symbol cannot be a hybrid symbol. It must be 3D only. Create an extruded rectangle the size that you want, the actual size of the skylight that you want to create.

[cadmovie089](#)

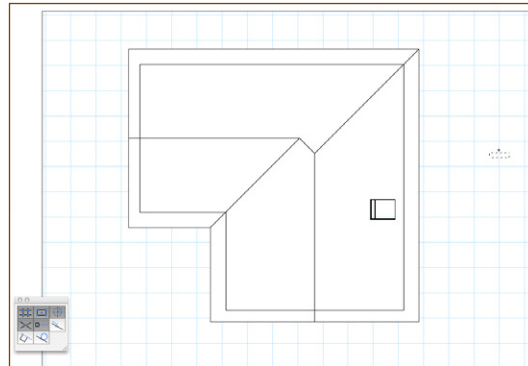
- Change to a **Top/Plan** view.
- Go to the **Resource Browser**.
- Double click on the skylight symbol.
- Click on the roof where you want the skylight to be.



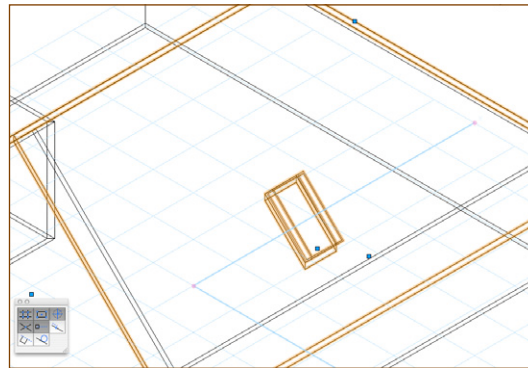
- Click on the button for **Edit Skylight**.
- On this dialog box you can control the position of the skylight on the roof.
- Your skylight symbol has been installed.



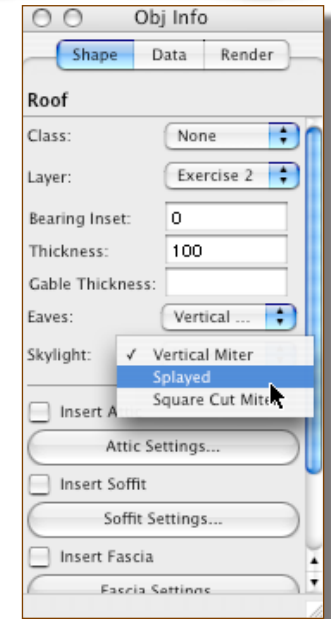
- You can edit the skylight after you have created it by editing the symbol.



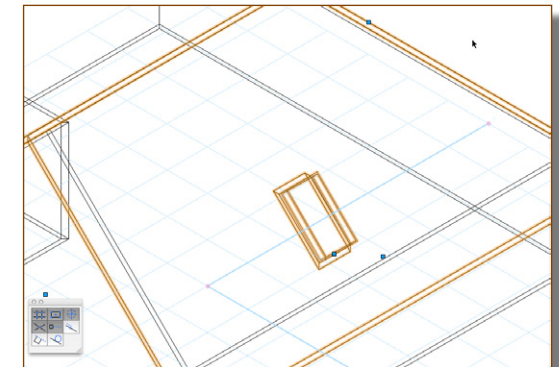
- If you change to a 3D view you can see the skylight in the roof.



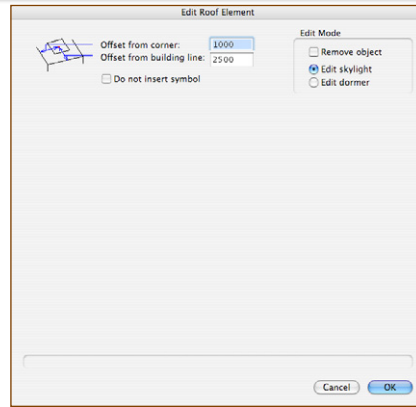
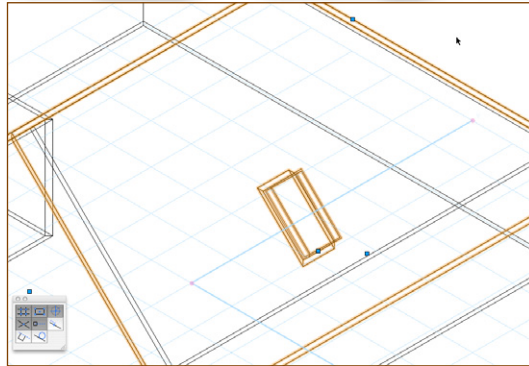
- You can change some of the skylight settings on the Object Info Palette.
- Change the skylight pop-up menu to Splayed.



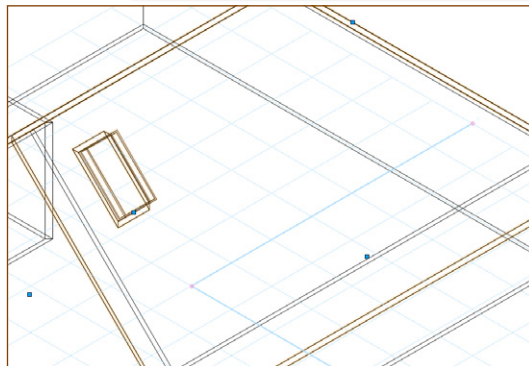
- This will change the way the roof reacts with the skylight.
- You will notice that you get selection handles on each roof face and at the bottom centre of each skylight.



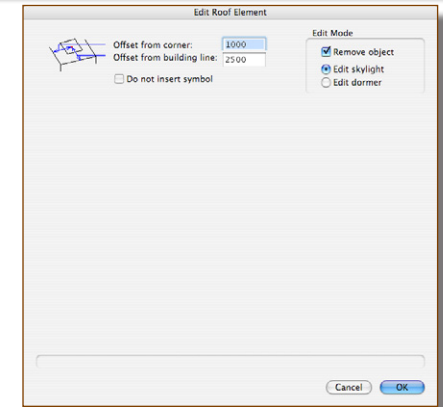
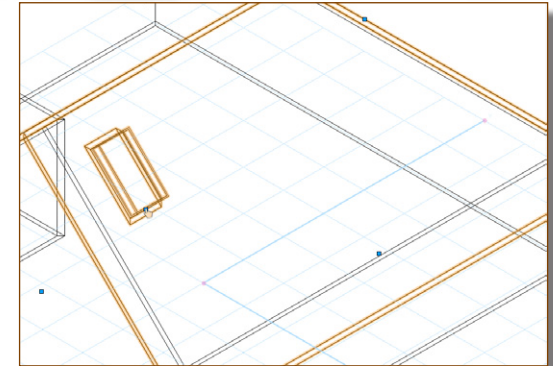
- Move your cursor over the handle for the skylight that you want to edit.
- Click once.
- This will open the Edit Roof Element dialog box.
- Change the parameters.
- Click on the **OK** button.



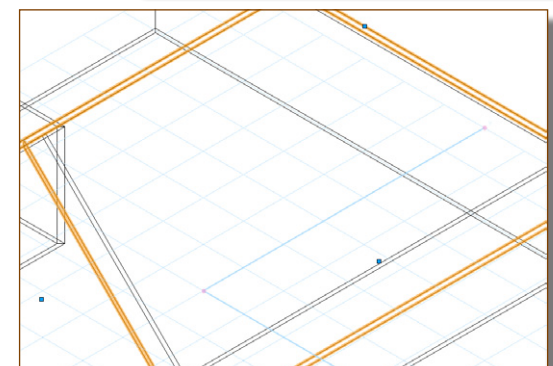
- The skylight moves to the new settings.



- To delete a skylight, move your cursor over the handle for the skylight that you want to remove. You will notice that the cursor changes to a hand.
- Click once to open the Edit Roof Element dialog box.
- Click on the **Remove Object** check box.
- Click on the **OK** button.



- You are returned to the drawing area, the roof is regenerated and the skylight is deleted.

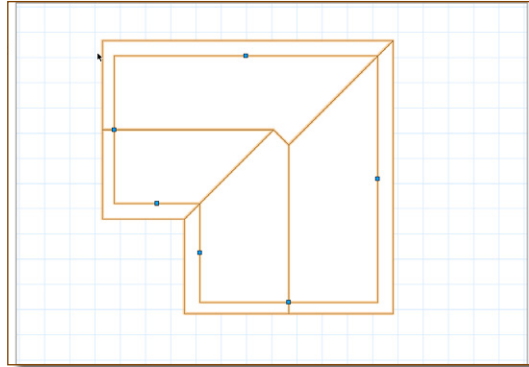


## Cut Out in a Standard Roof

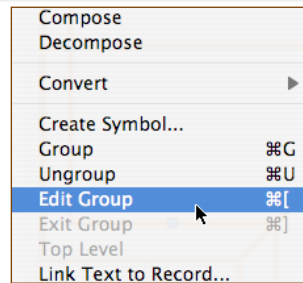
If you don't want to go to the trouble of creating a 3D symbol for the skylight, you can punch a simple hole in the roof face. VectorWorks calls these holes a cut out.

[cadmovie090](#)

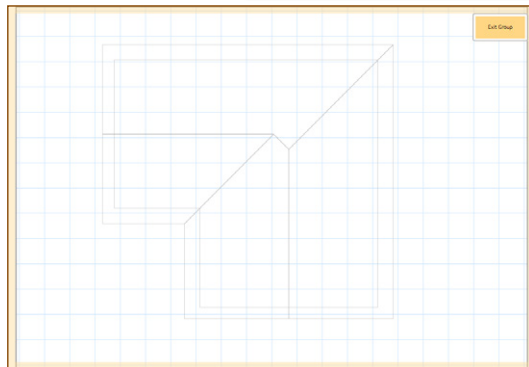
- Change to a **Top/Plan** view.
- Select the roof using the 2D Selection tool.



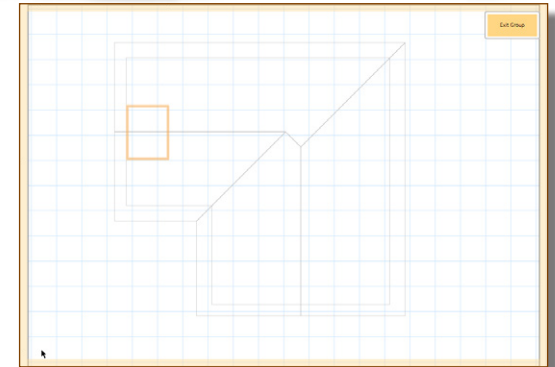
- Go to the Menu bar.
- Choose **Modify > Edit Group**.



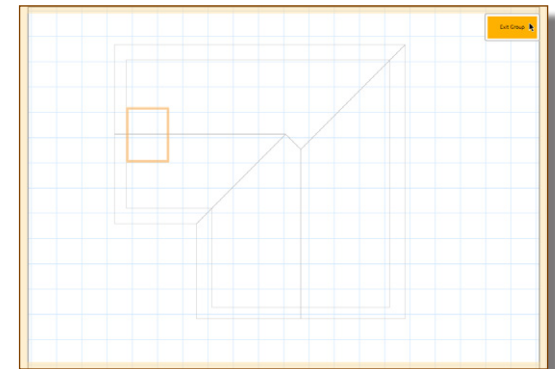
- This takes you inside the roof group and all the roof lines go grey.
- Make sure that you draw a 'shape' not just lines. This means that you have to draw a rectangle, circle or polygon.



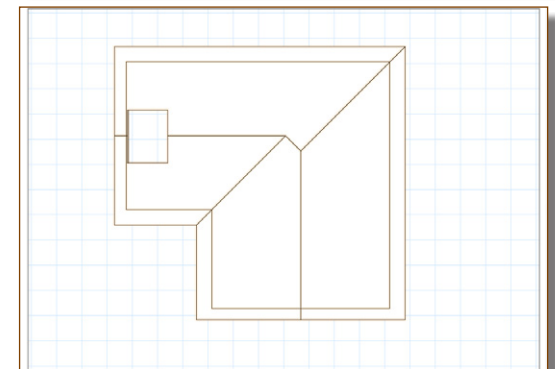
- Draw a rectangle.



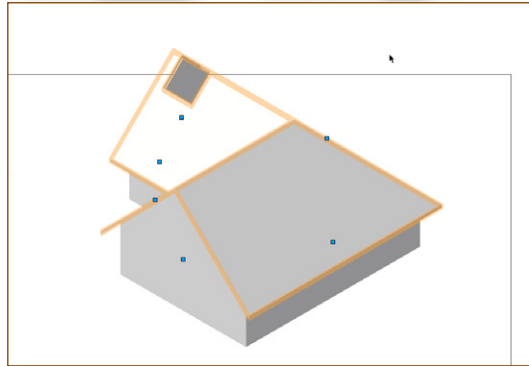
- Click on the **Exit Group** button at the top right corner of your drawing window.



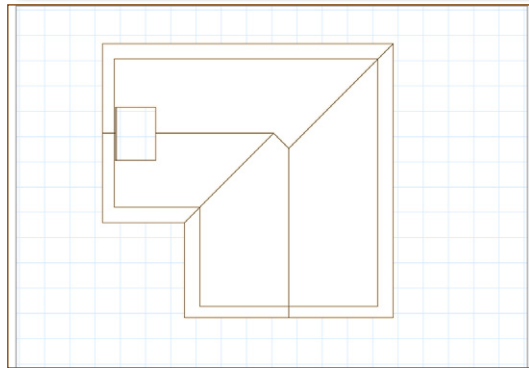
- You are back to the main view of your roof.



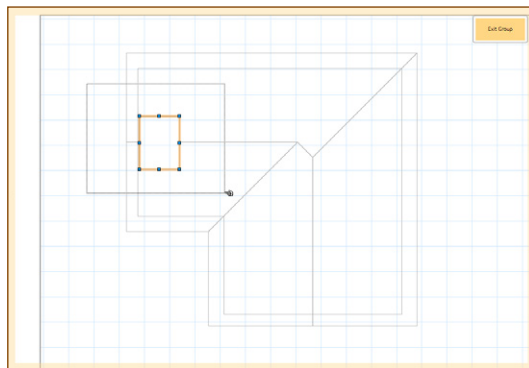
- The cut out can be seen in 3D if you render the view.



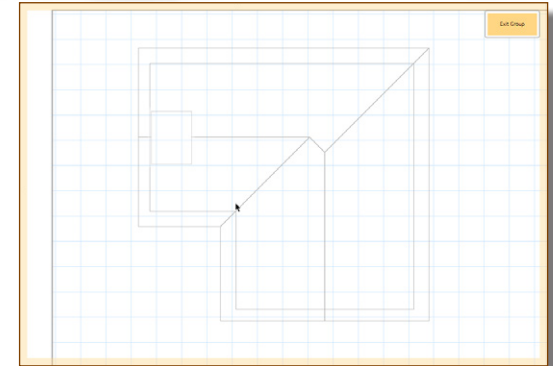
- To remove a roof cut out, select the roof .
- Go to the **Menu Bar**.
- Choose **Modify > Edit Group**.



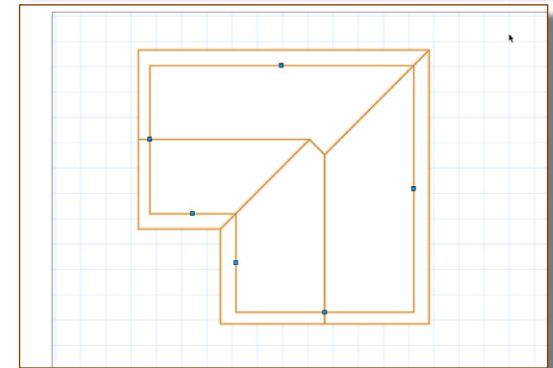
- Select the object that creates the cut out.
- If you use your **2D Selection** tool you can drag a marquee around the object you want to select.



- Delete the rectangle.
- Click on the **Exit Group** button at the top right corner of the drawing window.



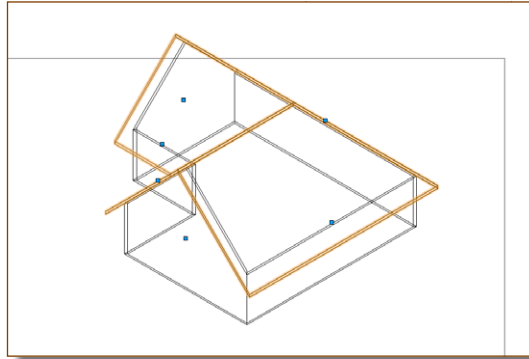
- You are returned to model. VectorWorks has updated the roof.



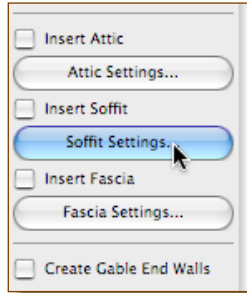
## Roof Accessories

[cadmovie091](#)

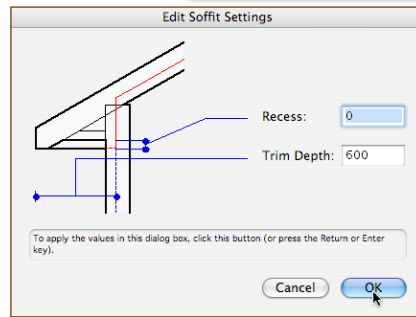
- Change to a **Top/Plan** view.
- Select the roof using the 2D Selection tool.



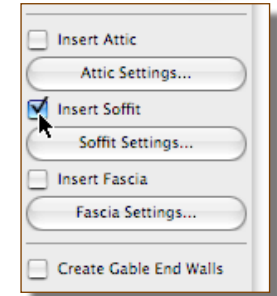
- Go to the Object Info palette.
- Click on the **Soffit Settings** button.



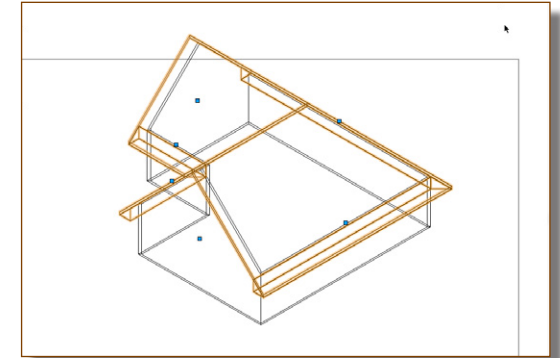
- Fill in the settings...



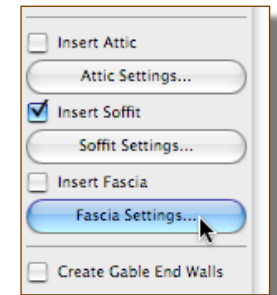
- Go to the Object Info palette.
- Click on the **Insert Soffit** button.



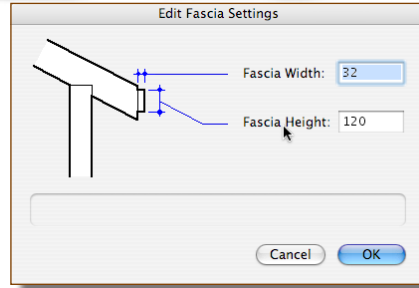
- VectorWorks adds the soffit to your roof.



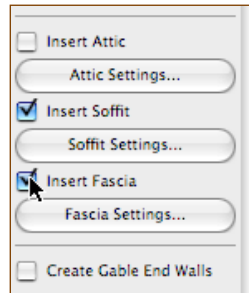
- Go to the Object Info palette.
- Click on the **Fascia Settings...**



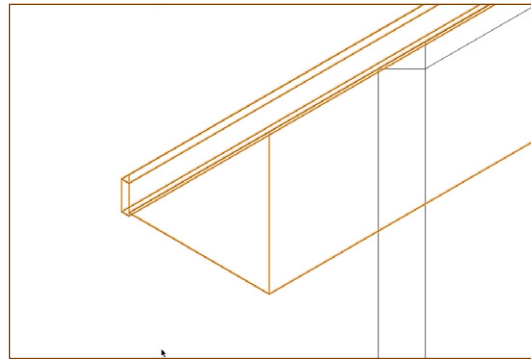
- Fill in the settings...
- Click on the **OK** button.



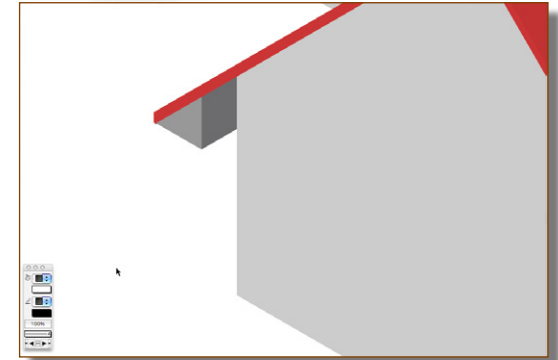
- Go to the Object Info Palette.
- Click on the tick box for **Insert Fascia**.



- VectorWorks inserts the Fascia



- If you ungroup the roof, you can change the colour and textures on the fascia and soffit separately.



### When You Can't Edit The Roof Enough

There are times when the editing that you can do to the roof is not enough.

For example:

- A roof that spans 2 floors may not work out correctly. The ridge may not be where you wanted it or the junction between the two roof faces may not be where you want it.
- When you want to put in ridges at a different place to where the standard roof wants to put them.

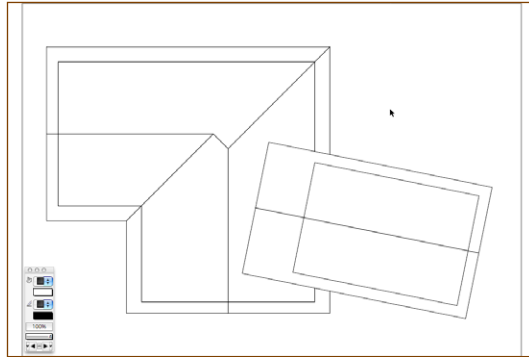
For these situations it is best to take the standard roof just as far as you can. The standard roof makes it so easy to put in dormers and skylights that you should really use it as much as you can. When you can't use the standard roof editing any more but you still want to edit the roof, it's time to ungroup the roof and edit the individual faces manually.

## Intersecting Roofs

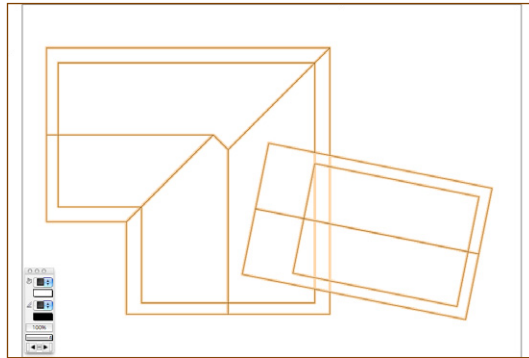
This exercise will show you how to find the intersection of two roofs.

[cadmovie092](#)

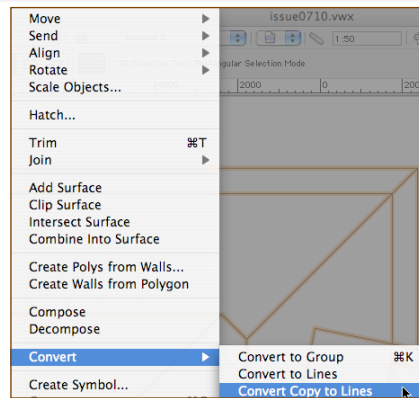
- You need a file with 2 roofs.



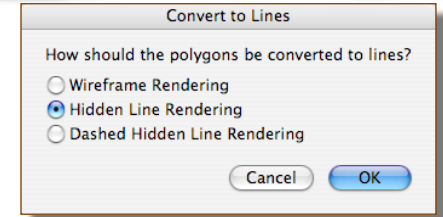
- Select both roofs.



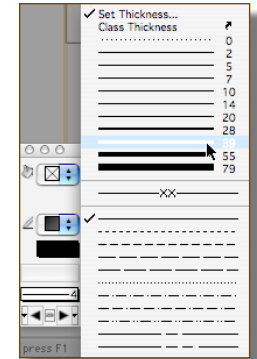
- Go to the **Menu Bar**.
- Choose **Modify > Convert > Convert Copy to Lines...**



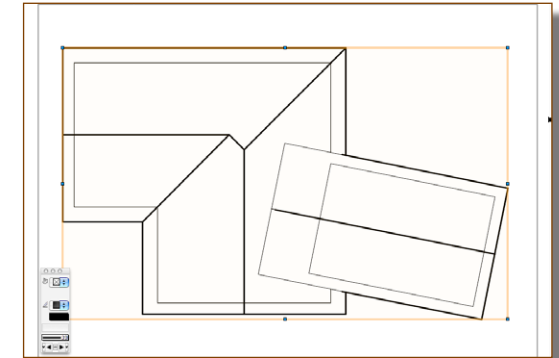
- Choose **Hidden Line Rendering**.
- Click on the **OK** Button.



- The result is a group of lines. If you make the lines heavy it will help you to see the lines.
- Use the **Attributes Palette** to make the lines very heavy.



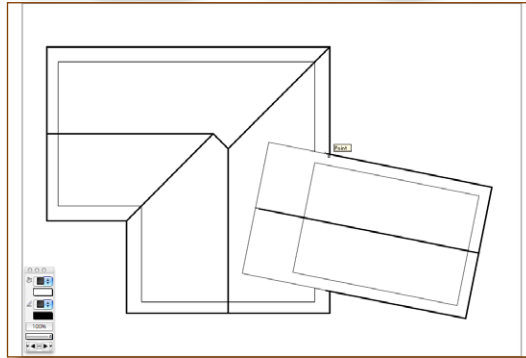
- Now the intersection lines are easier to see.



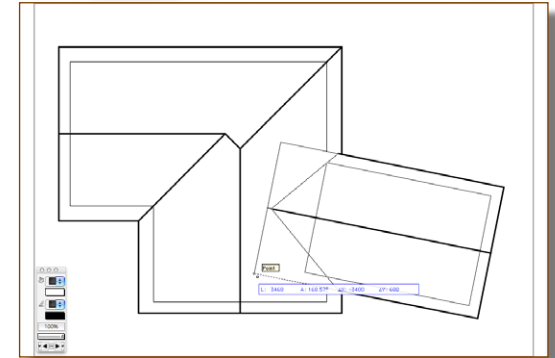
- Go to the **Basic Toolset**.
- Select the **2D Polygon Tool**.



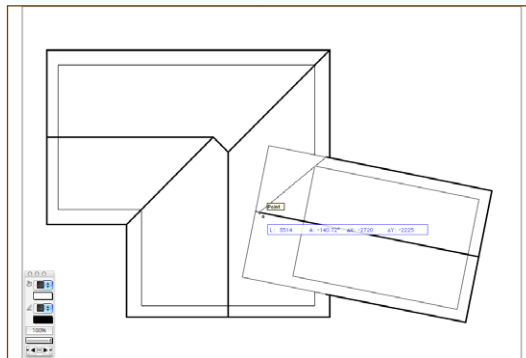
- Start at the intersection of the two roofs, at the eaves. The end of the heavy line is where the two roofs intersect.
- Click once.



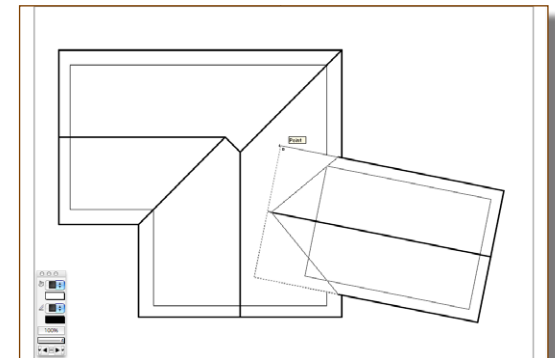
- Move the end of the roof.
- Click once.



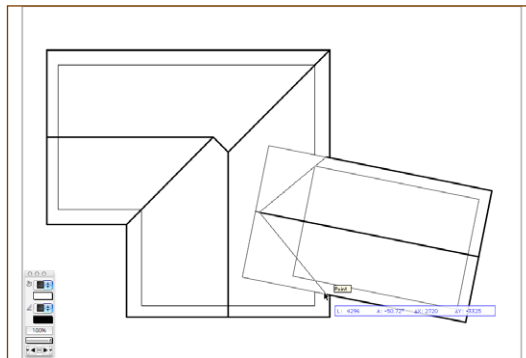
- Move to the end of the heavy line at the ridge. The heavy line stops where the ridge intersects with the other roof.
- Click once.



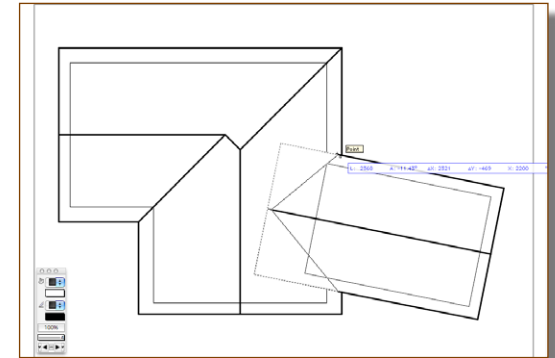
- Move to the other end of the roof.
- Click once.



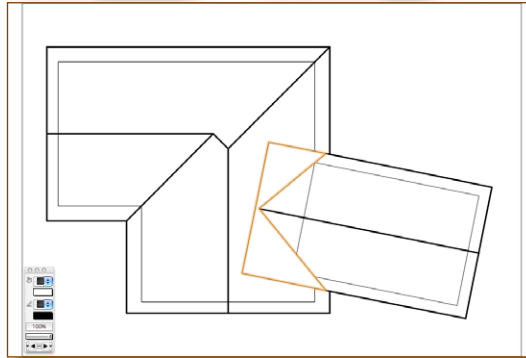
- Move the roof eave, where the heavy line stops.
- Click once.



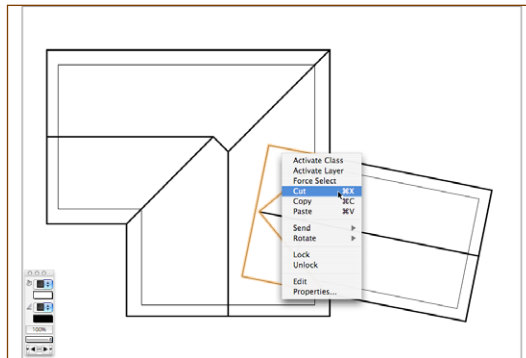
- Move back to where you started.
- Click once.



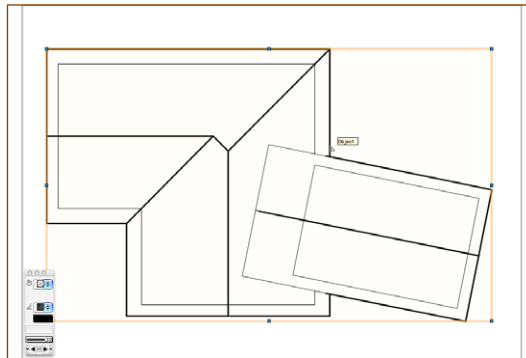
- You have a polygon. We'll need this to cut out the roof.



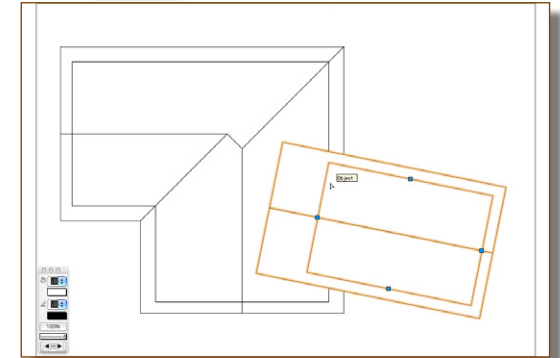
- Right mouse click on the polygon.
- Choose **Cut**.



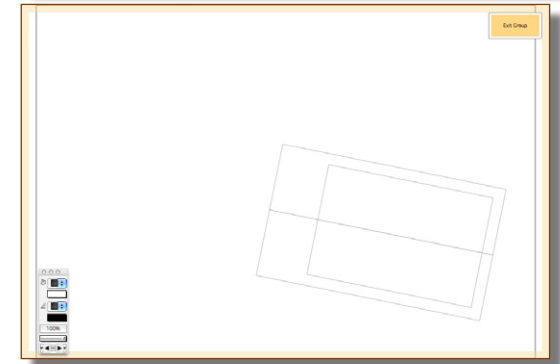
- Use the 2D Selection tool to select the heavy group of lines.
- Delete the group. It has done its job and we don't need it any more.



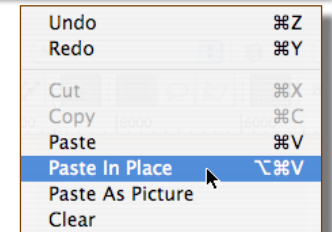
- Select the smaller roof.



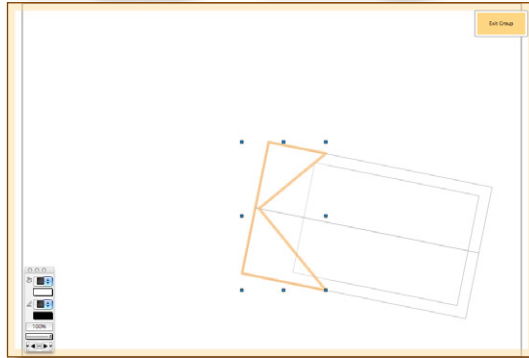
- Go to the Menu bar.
- Choose **Modify > Edit Group**.



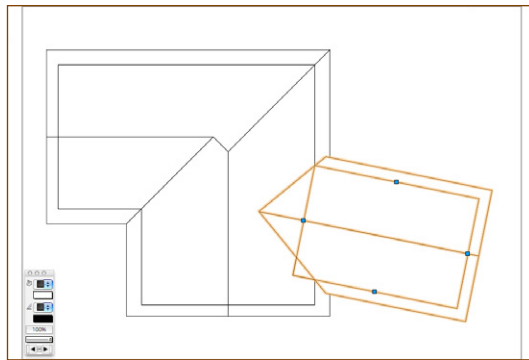
- Go to the Menu bar.
- Choose **Edit > Paste in Place**



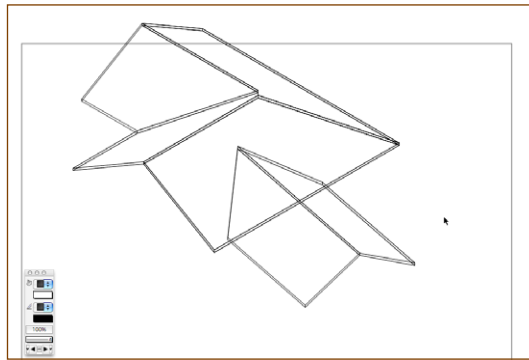
- Your Polygon is pasted on top of the roof.
- Click on the Exit Group button at the top right of the drawing area.



- Now you can see the roof has been recalculated.
- Notice that part is missing.



- If you change to a 3D view you can see how the roof has been cut out.



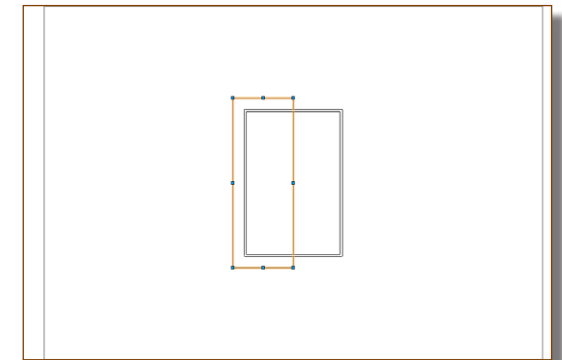
## Roof Face

A roof face is an old VectorWorks concept. We used to have roof faces before we had a complete roof. We would make a roof out of several roof faces. A roof face is one part of the roof, what you might call a roof plane. A roof face is a hybrid object. VectorWorks takes a 2D roof plane and projects it to 3D.

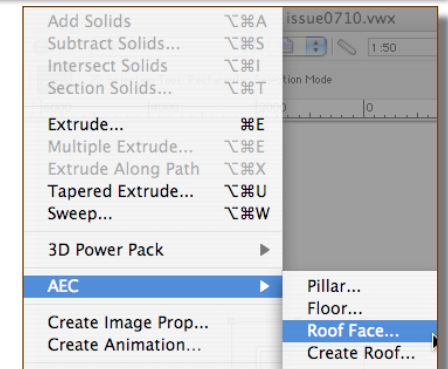
## Create Roof Face by Angle

### [cadmovie093](#)

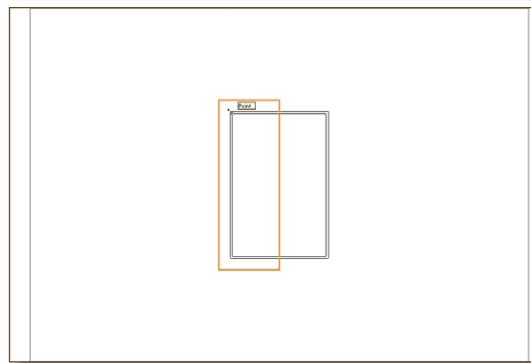
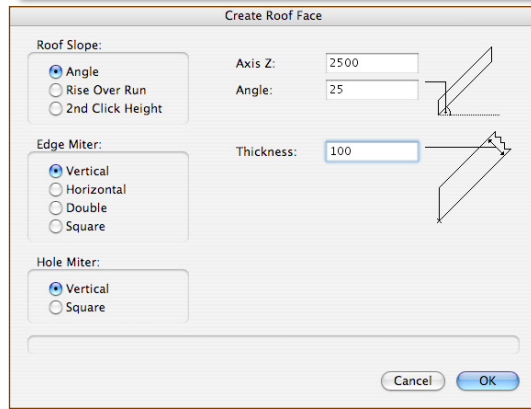
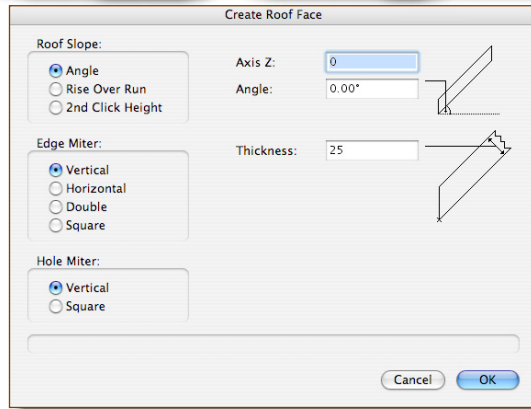
- Change to the **Exercise 3** layer.
- To create a roof face, select the rectangle with the **2D Selection** tool.



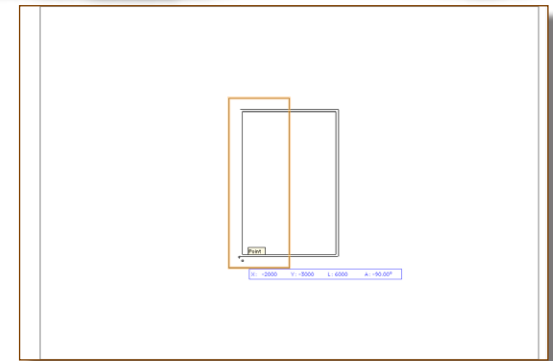
- Go to the Menu Bar.
- Choose **Model > AEC > Roof Face...**



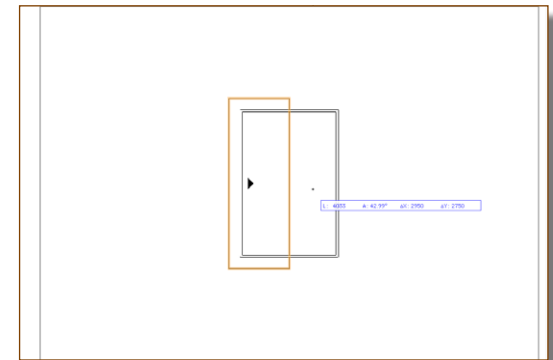
- This opens the **Create Roof Face** dialog box.
- Make the roof face using the **Angle** radio button.
- The **Axis Z** is the height to the roof pitch line from the bottom of the current layer. This has no relation to the project height. It is the height in the current layer.
- Angle is the angle of the roof.
- Fill in the settings that you want.
- Click on the **OK** button.
- Now you define the axis line (the pitch line). Keep your eye on the mode bar for this command. It tells you what to do.
- To define the axis line, move the cursor to the top left corner of the building. When the screen hints tell you that you are at the corner of the building click once.



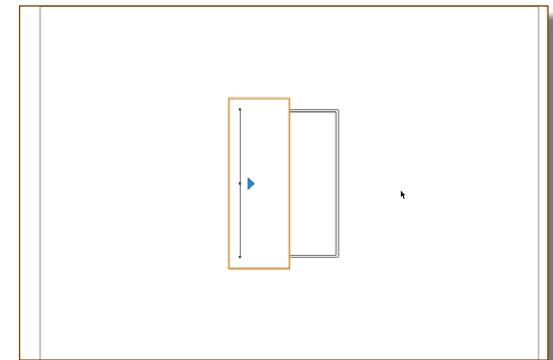
- Now move down to the end of the roof axis. When the screen hints tell you that you are at the corner of the building, click once.



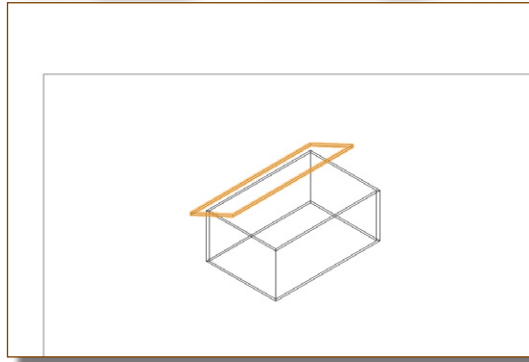
- The last thing to do is to define the high side of the roof. Move the cursor to the right and you will notice a big black arrow that points to the right. This indicates the high side of the roof.
- Click once.



- The roof face is created and is brought to the front.



- In 3D...



### Cut Out After You Have Made the Roof Face

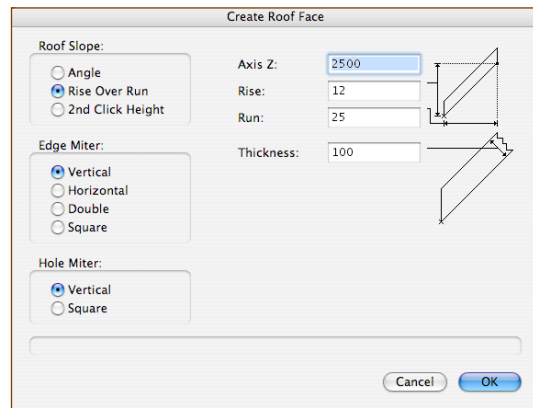
The other way to create the cut out in the roof face is when you have already created the roof and then you want to punch a hole in it. This technique is exactly the same as creating the cut out in a standard VectorWorks roof.

### Curved Roofs

VectorWorks can't really make a curved roof. If you want a curved roof you have to create an extrusion for the curved part of the roof.

### Create Roof Face by Rise Over Run

Creating a roof by rise over run is similar to the create roof by angle. The only difference is that instead of typing in the angle you give a run - a horizontal length and a rise for the run.



### Create Roof - Peak Height Above Axis

This option is under used but very useful when you know the height to the ridge (peak) above the axis (pitch line).

### Cut Out in a Roof Face

If you know accurately where you want the roof cut out, you could do it before you create the roof face.

# Questions and Answers

## Q. "How can I use an iPod as a backup device?"

I'll answer the first part of this question first. I think the iPod is a great little device. Not just for carrying around your music, but you can also use your iPod for backing up files or for copying files from one machine to another.

### Step 1

You need to buy an iPod. There are a few to choose from, but which one should you get?

How much do you need to store?

You need an iPod that has some storage, so that rules out the iPod Shuffle.

If you want a small iPod that has modest storage, get an iPod Nano.

If you want slightly more storage, but you want a beautiful thing, get the iPod Touch. It's a wonderful thing to play with, but it still has only modest storage.

For a decent amount of storage you need the iPod Classic. It comes with 80GB or 160GB of storage. You could get the 160GB model, put thousands of songs on it and not even use one half of the storage.



### Step 2

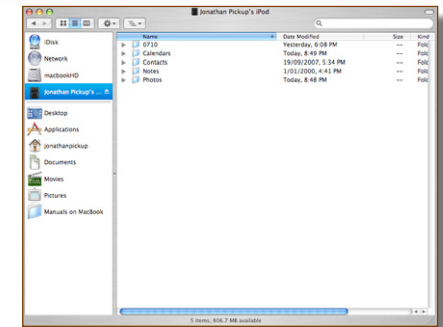
With an iPod you use iTunes to copy music, photos, movies and calendars. When you choose the things to copy you can also enable the use of the iPod for file storage.

You have to tick the option for Enable Disk Use.



When you check this and connect your iPod, it turns up as a connected hard drive on your desktop.

Now you can treat the iPod as backup device.



I have ordered the cables I need to connect my iPod to a TV. When they arrive I will show you how to connect for presentation.