SHORT SHARP TRAINING (monthly) issue 1002

Welcome to this issue of the VectorWorks Short Sharp Training (monthly). This manual is designed to work like a user group meeting. There is a main workshop topic, then extended movies showing tips or techniques and an area for beginners.

Workshop Topic
Stacked Layers/Unified View & Setting Up Layers

Stacked layers and unified view allow you see al your layers together, so when you change views, all the layers change. But there are some things to watch for. Setting up your layers correctly is essential is you want to use Vectorworks for BIM, and if you want to use Stacked Layer or Unified View.

Extended Podcast 100 - Click here

Dim Text Tools in Vectorworks Australia and New Zealand.

Extended Podcast 101 - Click here

Using the Clip tool on viewports.

Beginners Corner - Click here

Select Similar tool, some times called the magic wand.

Stacked Layers/Unified View

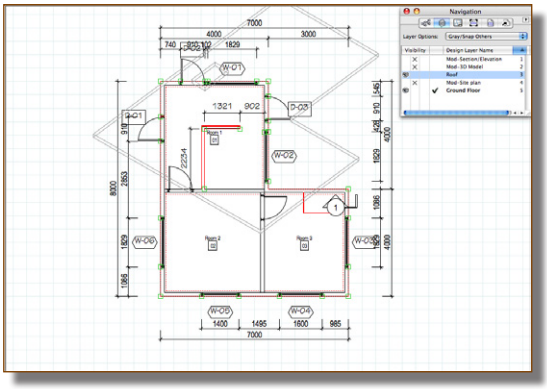
Stacked Layers

Stacked layers was a new technique introduced in Vectorworks 2008. Before Vectorworks 2008, if you wanted to see a complete view of your project, you would make a new layer for 3D viewing. Then you could layer link all your design layers to the 3D model layer. In order to view your model, you would change to this layer and make all the Layer Options **Active Only**. This would be the place to set up views for rendering, creating elevations and so on.

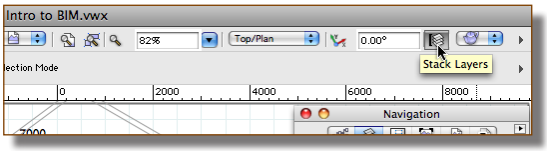
With Vectorworks 2008 and 2009, you do not have to set up the 3D model layer. Stacked Layers allow you to see all the visible layers in your file, and when you move the view around, all the layers look like they are joined together. Vectorworks uses the layer Z height to get all the layers to set correctly in 3D.

cadmovie440

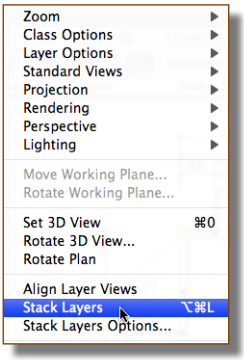
- This is the normal view of a building when you change the view. One layer has the correct view, the other has remained in isometric. When you change views, both layers do not change together.
- The answer is to use Stacked Layers.



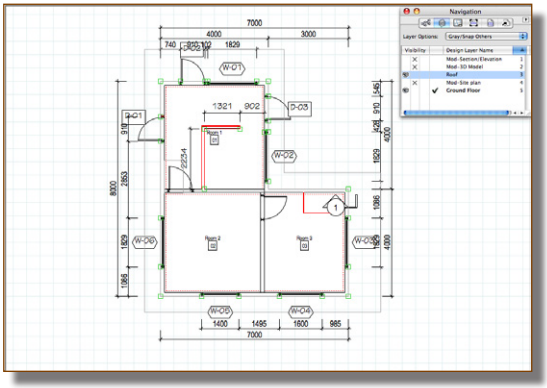
- Go to the View bar. This is one place where you will find the Stack layers .



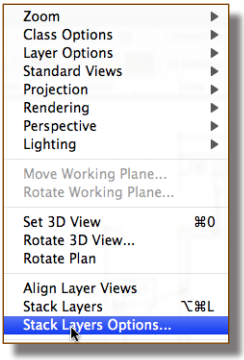
- The other place to find **Stack Layers...** is on the View menu.



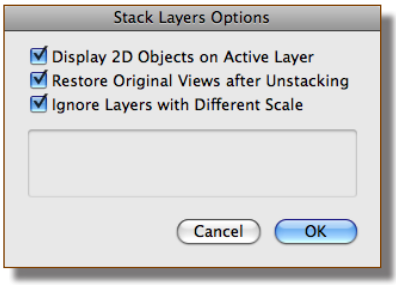
- When you turn on Stack Layers, all visible layers change to the same view. If you change the view, all the visible layers show the same view.



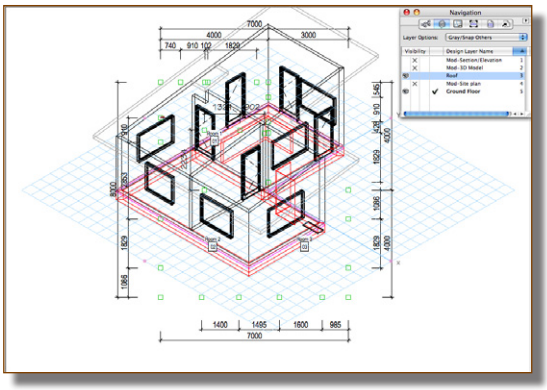
- Go to the Menu Bar.
- Choose **View > Stack Layers Options...**



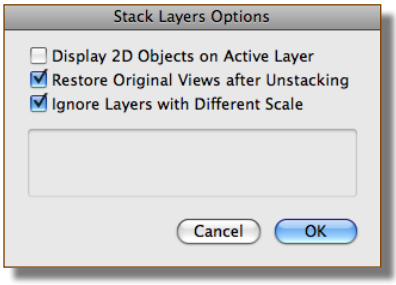
- You can set the options you want.



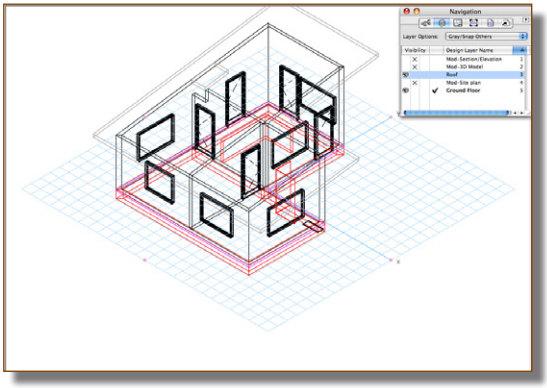
- The top option controls the look of all the 2D objects. If you turn this option on, all the 2D objects are shown. Notice all the dimensions, they can get in the way.



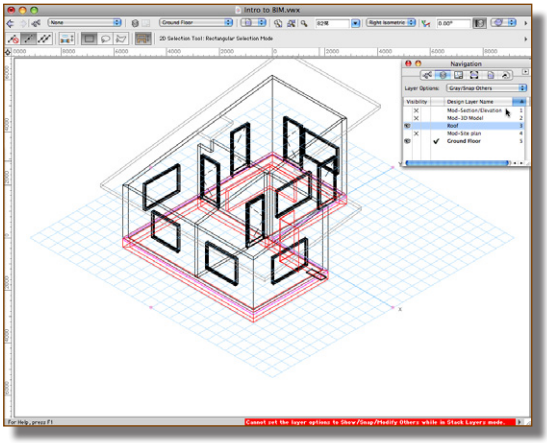
- Try turning off the Display 2D objects option.



- For visualization, this is a better option. The model looks a lot cleaner.



- You will find it difficult to work with stacked layered turned on, there are some things that do not work, like you can't use Show/Snap/Modify others for the layer options, and all of the 2D tools don't work.
- You will find yourself turning stacked layers on, just for visualization. You will have to turn Stacked Layers off to work.

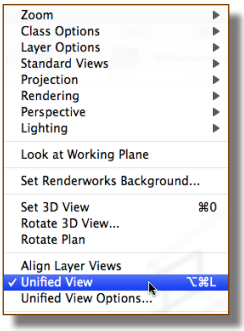


Unified View

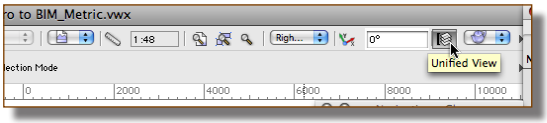
cadmovie441

The Unified View is a big improvement, now you can use the 2D tools with Unified View, you can use Show/Snap/Modify others for the layer options, and it's just a lot quicker.

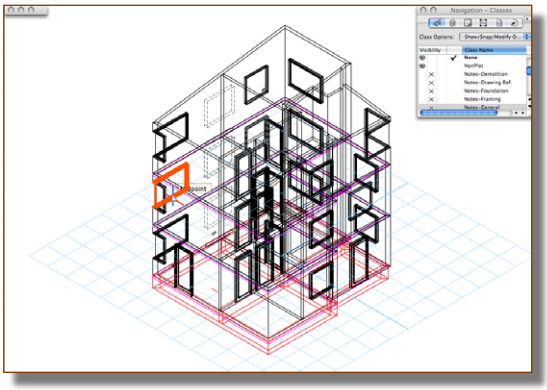
- Go to the Menu Bar.
- Choose **View > Unified View** to turn on the Unified View.



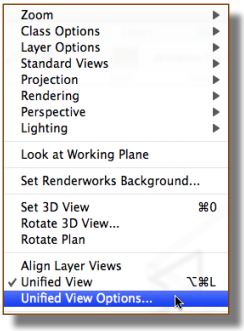
- Or go to the View Bar and click on the **Unified View** button. This button allows you to turn the Unified View on and off quickly.



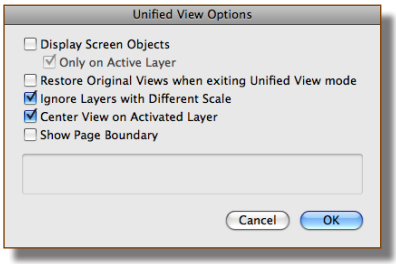
- The Unified View looks like the Stacked Layers, but you can use all the 2D tools and you can use Show/Snap/ Modify others for the layer options. This allows you to select and edit objects on other layers.



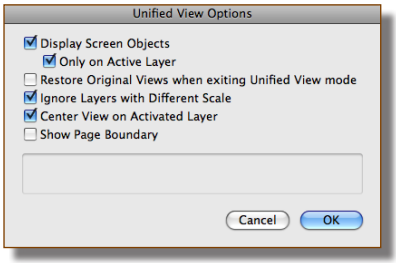
- There are Unified View options on the view menu.



- Display Screen Objects only has an effect on the 2D objects on the layer that are set to Screen Plane, not to active Layer Plane.



So, depending on your object settings, turning this option on or off might have no effect on the information you see.

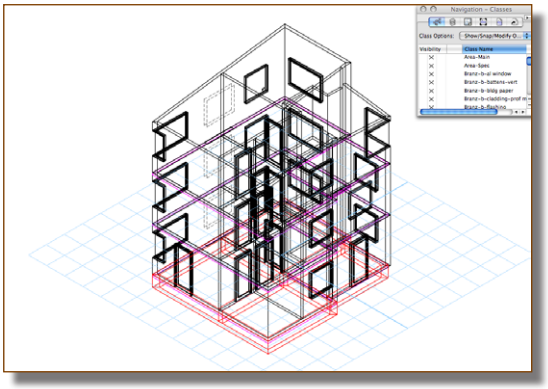


I have my default set on Layer Plane, so I do not see a difference when I change this option.

- Use the Navigation palette to control the layers.

I use Unified View with my layer options set to Show/Snap/Modify Others. Then I turn on the layers I want to see.

I also use the Navigation palette to control the classes, turning off all the information I do not want to see.



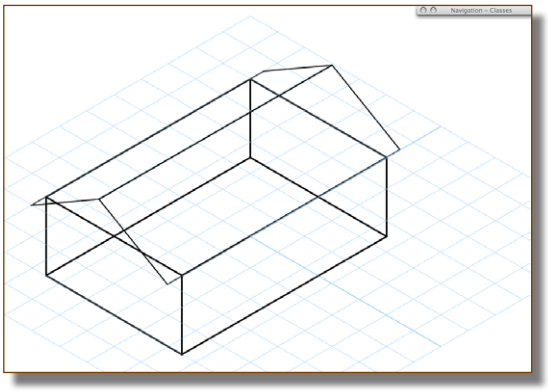
When using Unified View, all visible layers must be the same scale.

Setting up Layer Heights - 1 Floor 1 Roof

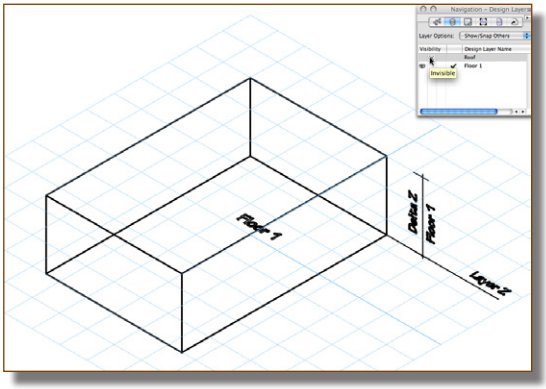
cadmovie442

You have to set the layer heights correctly if you want to use Stacked Layers/Unified View. Getting the Layer Z and Delta Z at the correct height is crucial. If you fail, you building will have bits missing, or the floors will mash into each other.

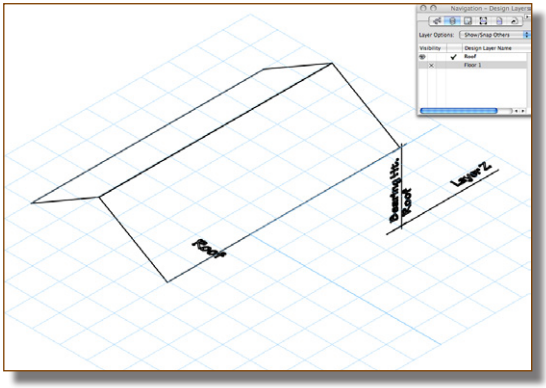
- Here is a simple project. One story of the building with a roof on it.



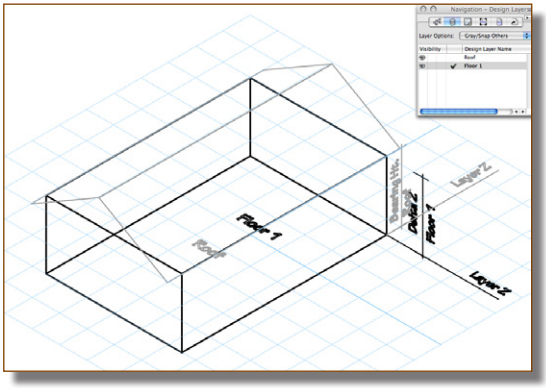
- One layer for the walls. The Layer Z for Floor 1 is the project level for that story. I usually set the Layer Z to 0 for this floor.
- The Delta Z for Floor 1 is the height form the slab to the bearing height of the roof.



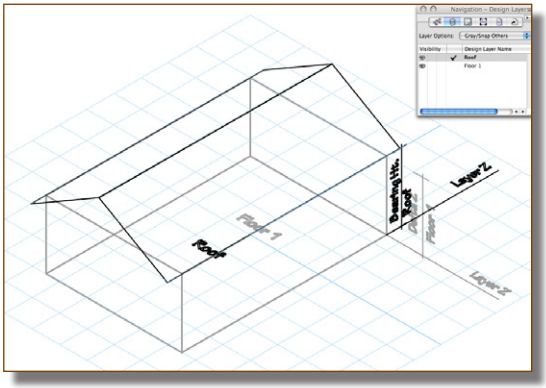
- One layer for the roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the layer Z for the roof is 0



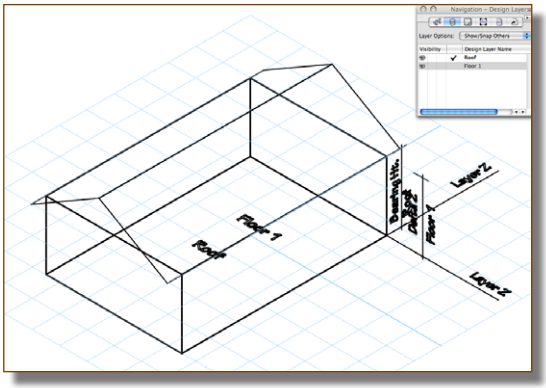
- Here is the wall layer with the roof layer grey.



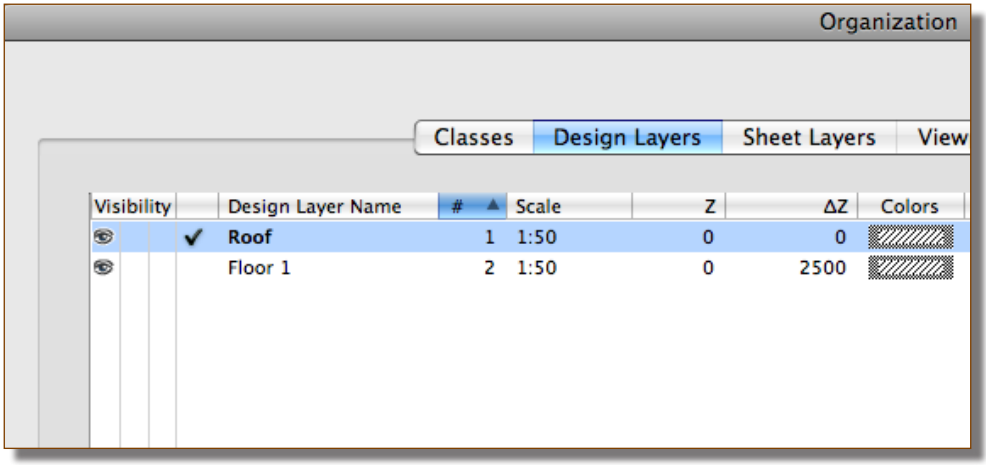
- Here is the roof layer with the wall layer grey.



- Both layers visible.



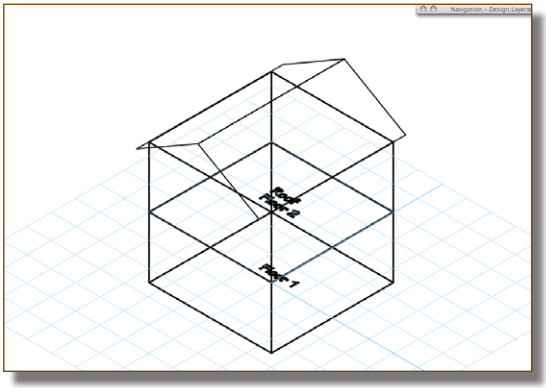
- Here are the Layer Z heights and Delta Z heights for the two layers.



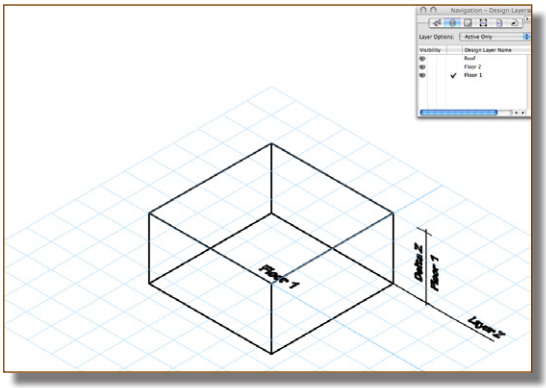
Setting up Layer Heights - 2 Floors 1 Roof

cadmovie443

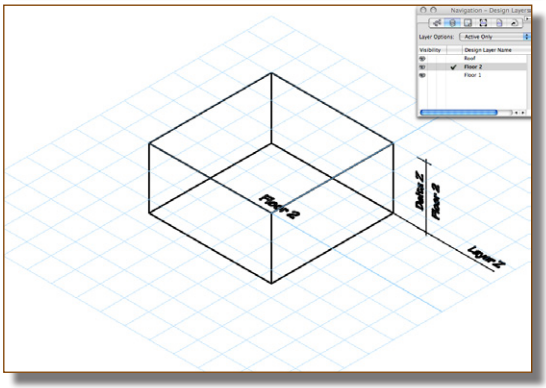
2 story building project, with one roof.



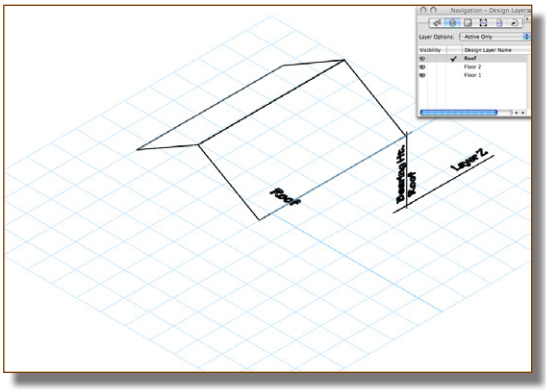
- One layer for the Floor 1. The Layer Z for Floor 1 is the project level for that story. I usually set the Layer Z to 0 for this floor.
- The Delta Z for Floor 1 is the height from the FFL Floor 1 to FFL floor 2, say 2.5m.



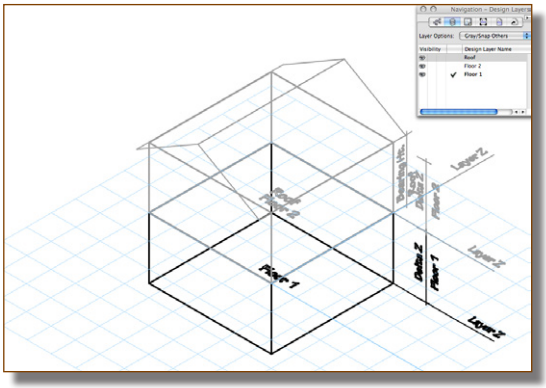
- One layer for Floor 2. The Layer Z for Floor 1 is the project level for that story, say 2.5m.
- The Delta Z for Floor 2 is the height from the slab to the bearing height of the roof,



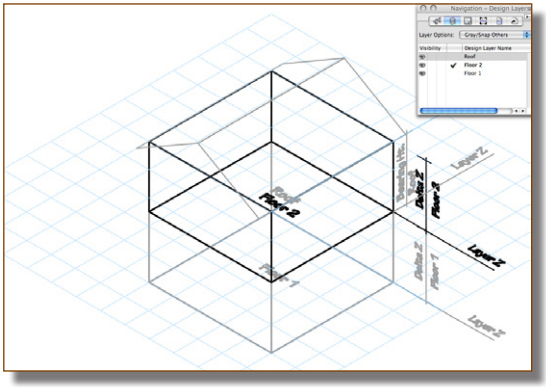
- One layer for the roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the layer Z for the roof is 2.5m.



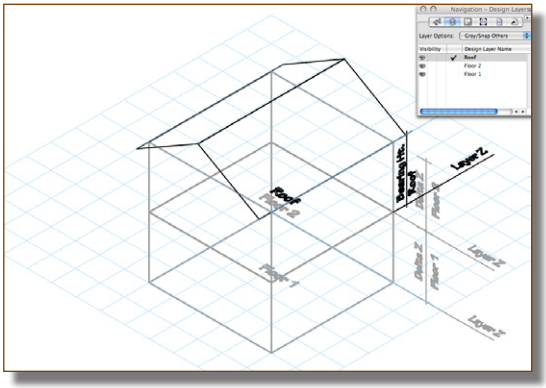
- Here is Floor 1 with the other layers grey.



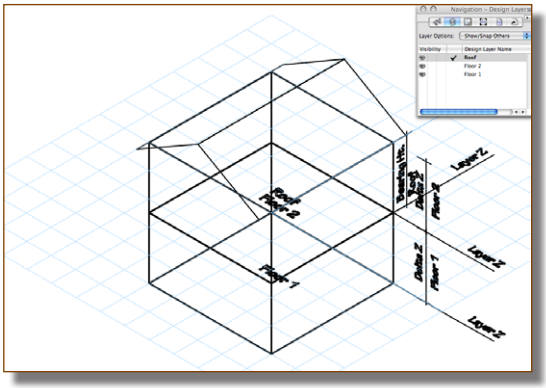
- Here is Floor 2 with the other layers grey.



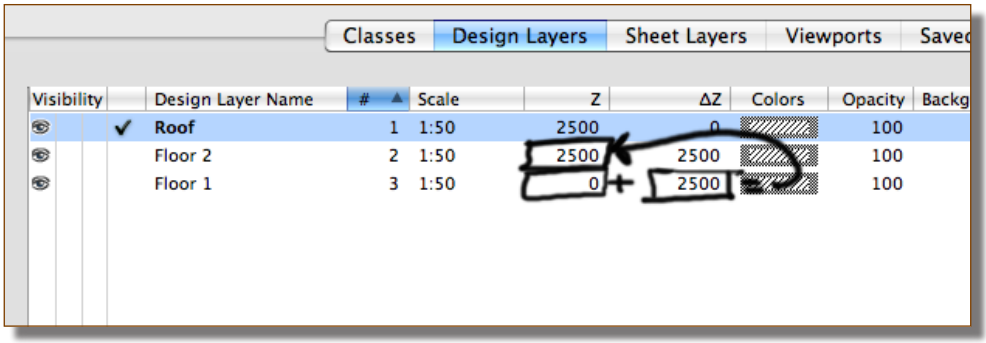
- Here is the roof layer with the other layers grey.



- All layers visible.



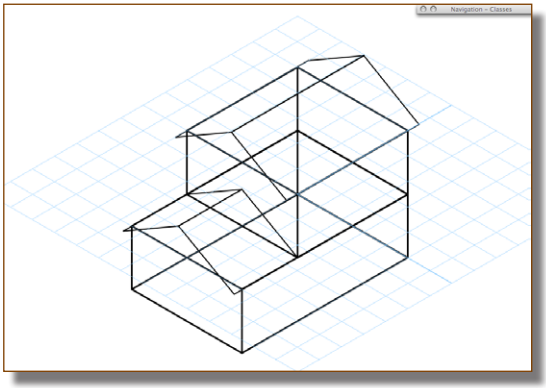
- Here are the Layer Z heights and Delta Z heights for the layers.
- Add the Layer Z to the Delta Z of Floor 1. This gives you the Layer Z for Floor 2



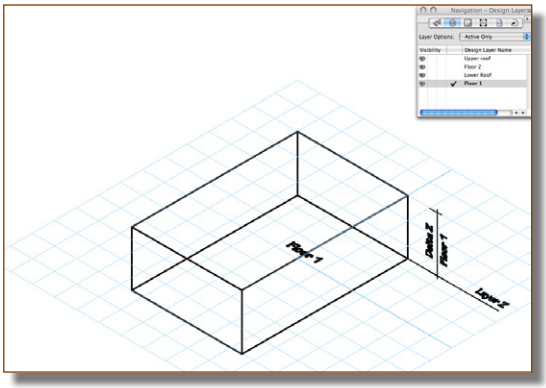
Setting up Layer Heights - 2 Floors 2 Roofs

cadmovie444

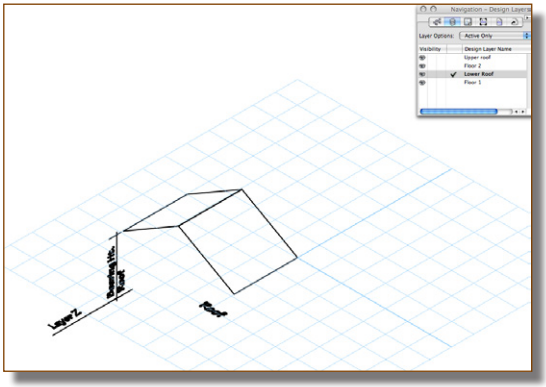
2 story building project, with two roofs.



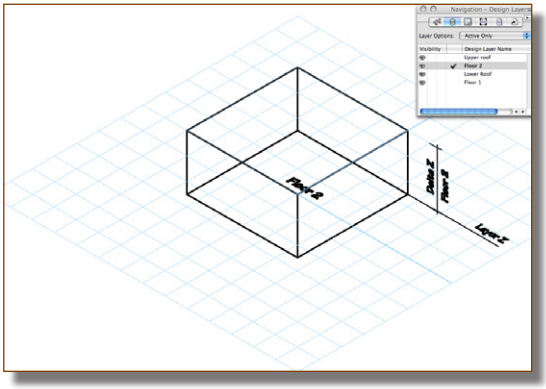
- One layer for the Floor 1. The Layer Z for Floor 1 is the project level for that story. I usually set the Layer Z to 0 for this floor.
- The Delta Z for Floor 1 is the height from the FFL Floor 1 to FFL floor 2, say 2.5m.



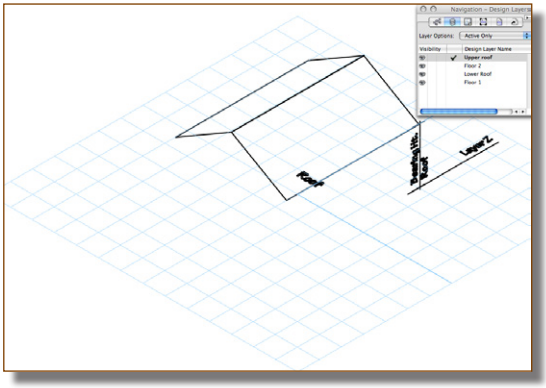
- One layer for the lower roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the the layer Z for the roof will be 0.



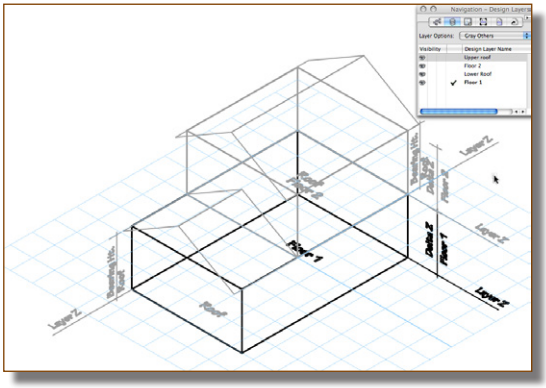
- One layer for Floor 2. The Layer Z for Floor 1 is the project level for that story, say 2.5m.
- The Delta Z for Floor 2 is the height from the slab to the bearing height of the roof, in this case 2.5m



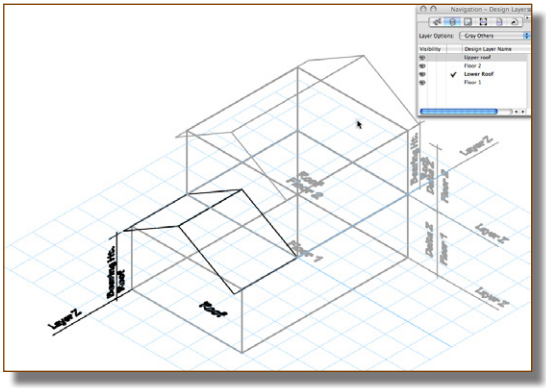
- One layer for the upper roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the layer Z for the roof is 2.5m.



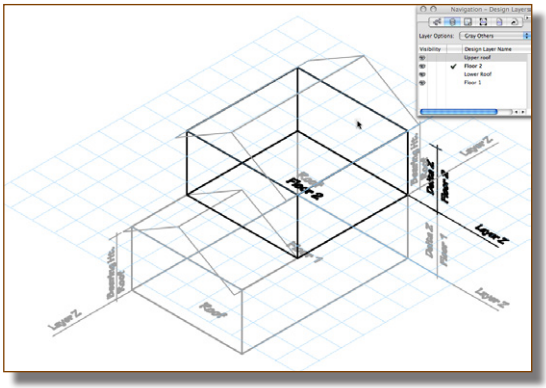
- Here is Floor 1 with the other layers grey.



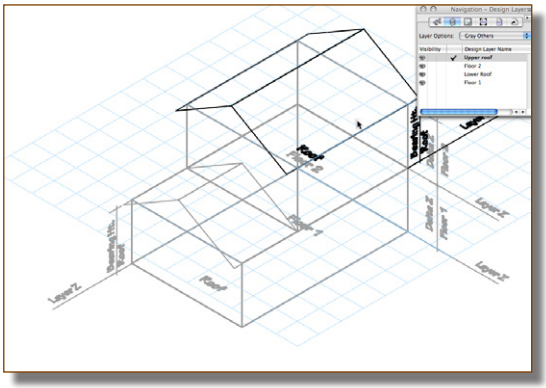
- Here is the lower roof layer with the other layers grey.



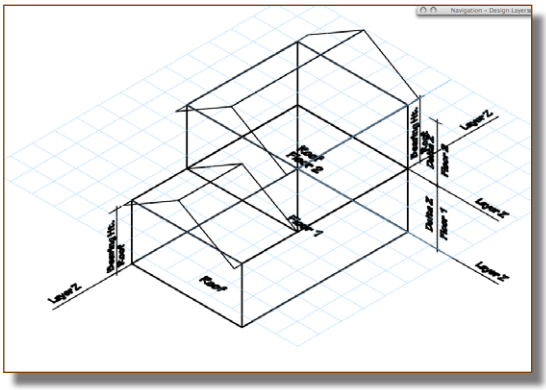
- Here is Floor 2 with the other layers grey.



- Here is the upper roof layer with the other layers grey.

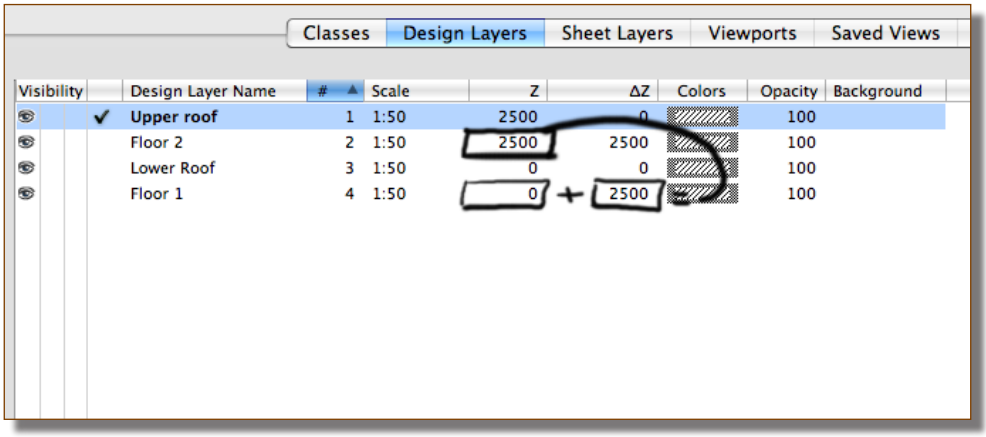


- All layers visible.



- Here are the Layer Z heights and Delta Z heights for the layers.

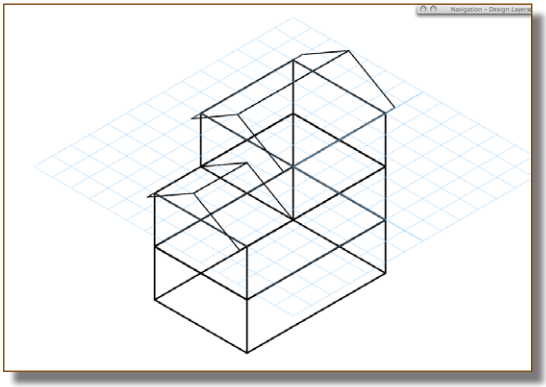
Add the Layer Z to the Delta Z for Floor 1. This gives you the Layer Z for Floor 2.



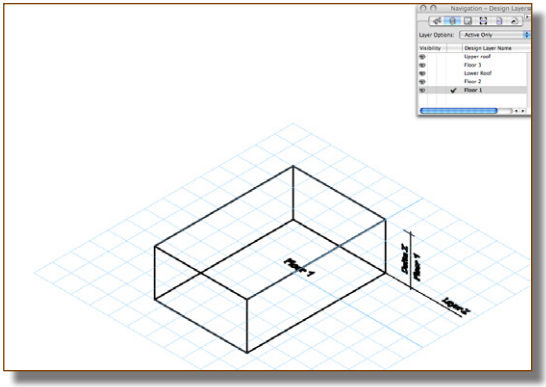
Setting up Layer Heights - 3 Floors 2 Roofs

cadmovie445

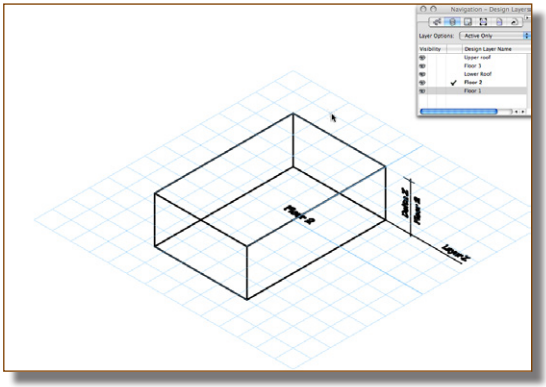
3 story building project, with two roofs.



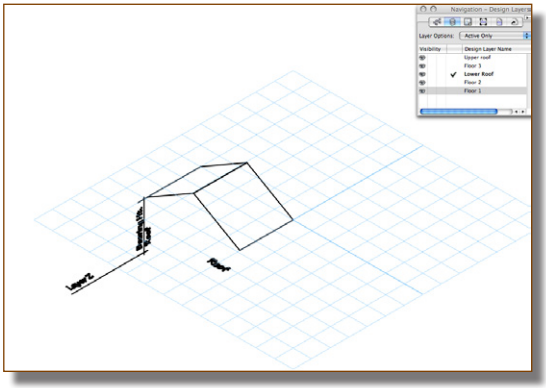
- One layer for the Floor 1. The Layer Z for Floor 1 is the project level for that story. I usually set the Layer Z to 0 for this floor.
- The Delta Z for Floor 1 is the height from the FFL Floor 1 to FFL floor 2, say 2.5m.



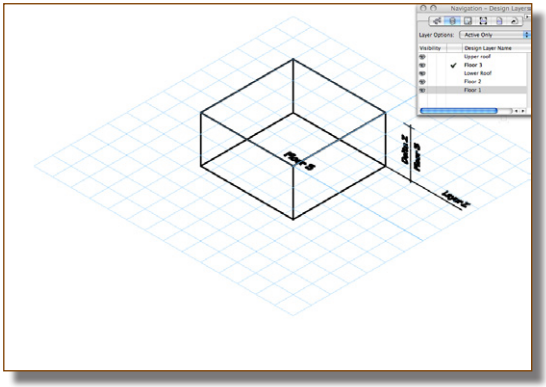
- One layer for Floor 2. The Layer Z for Floor 1 is the project level for that story, say 2.5m (the delta Z from the floor below).
- The Delta Z for Floor 2 is the height from the slab to the bearing height of the roof, in this case 2.5m



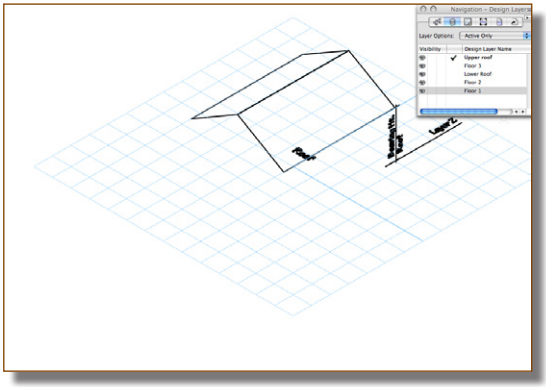
- One layer for the lower roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the the layer Z for the roof will be 2.5m.



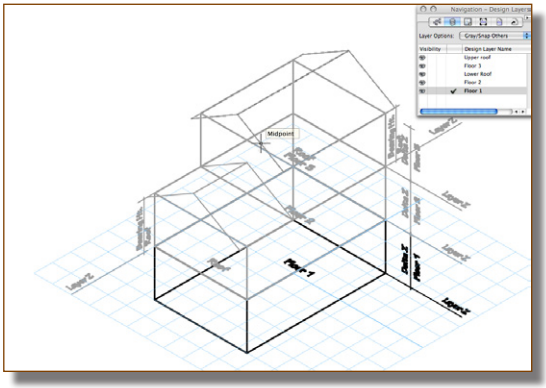
- One layer for Floor 3. The Layer Z for Floor 3 is the project level for that story, say 5.0m (the layer Z from the flooe below + delta Z from the floor below).
- The Delta Z for Floor 3 is the height from the slab to the bearing height of the roof, in this case 5.0m



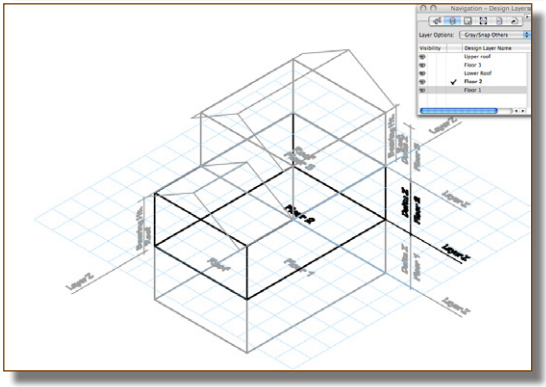
- One layer for the upper roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the layer Z for the roof is 5.0m.



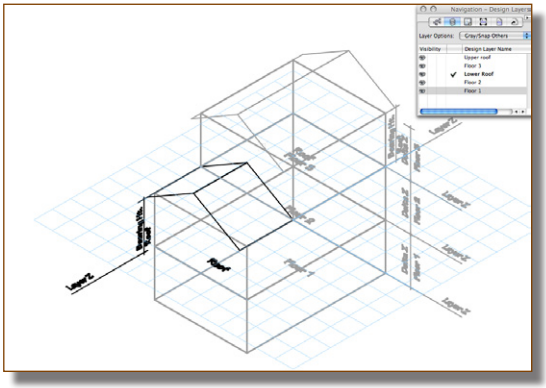
- Here is Floor 1 with the other layers grey.



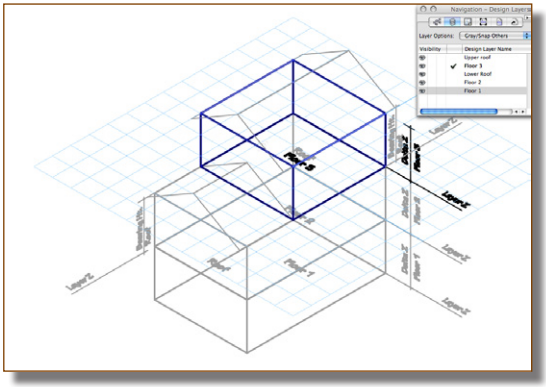
- Here is Floor 2 with the other layers grey.



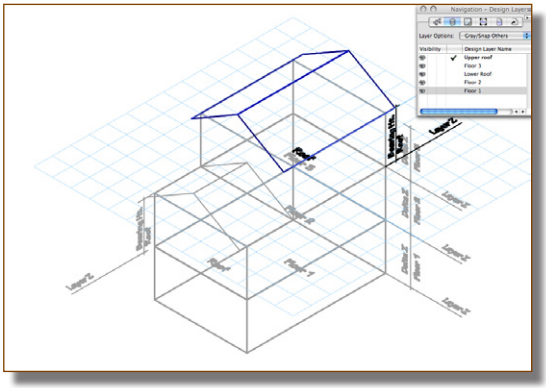
- Here is the lower roof layer with the other layers grey.



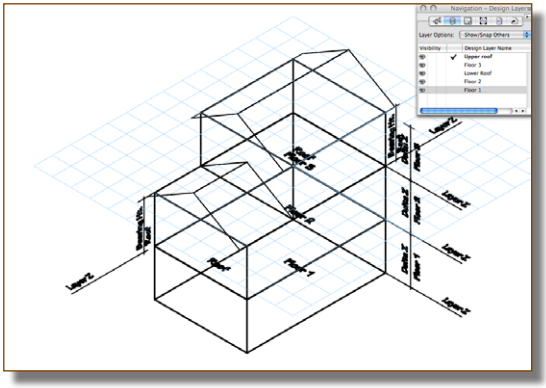
- Here is Floor 3 with the other layers grey.



- Here is the upper roof layer with the other layers grey.



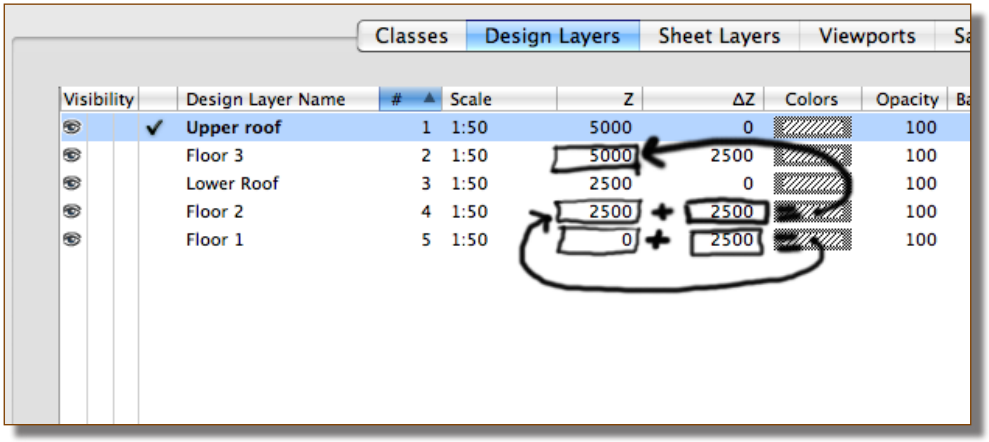
- All layers visible.



- Here are the Layer Z heights and Delta Z heights for the layers.

Add the Layer Z to the Delta Z for Floor 1. This gives you the Layer Z for Floor 2.

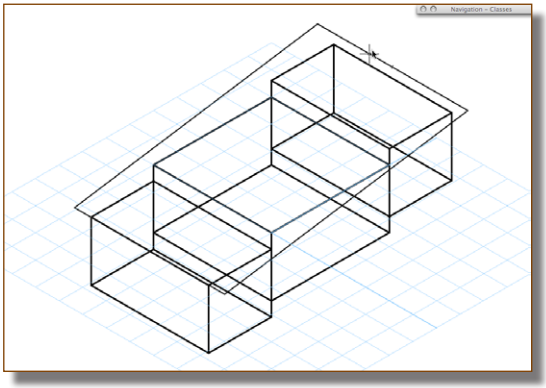
Add the Layer Z to the Delta Z for Floor 2. This gives you the Layer Z for Floor 3.

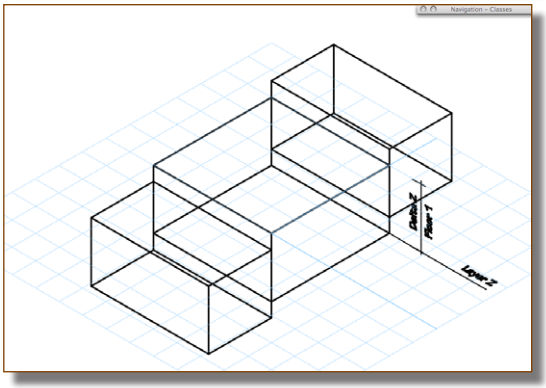


Setting up Layer Heights - 1 Floor - Multiple Levels, 1 Roof

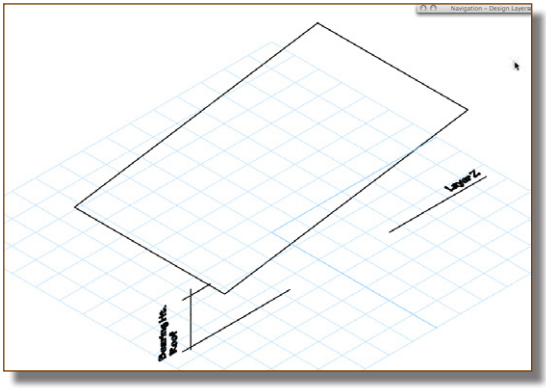
cadmovie446

One story building project, with multiple levels, but only one roof.



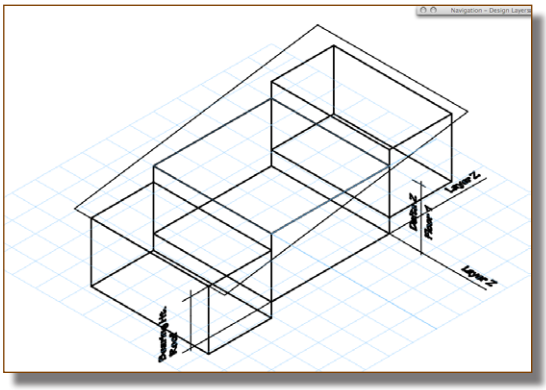


- One layer for all the levels that make up Floor 1. Usually, if they will be shown on the same plan drawing, they should be in the same layer. The Layer Z for Floor 1 is the project level for that story. I usually set the Layer Z to 0 for this floor.



- The Delta Z for Floor 1 is the height from the FFL Floor 1 to FFL floor 2, say 2.5m.
- One layer for the roof. The Layer Z for the roof layer should be the same as the floor supporting the roof.
- In this case the the layer Z for the roof will be 0.0m.

- Layer Z for Floor 1 is the
- All layers visible.



- Here are the Layer Z heights and Delta Z heights for the layers.

Add the Layer Z to the Delta Z for Floor 1. This gives you the Layer Z for Floor 2.

Add the Layer Z to the Delta Z for Floor 2. This gives you the Layer Z for Floor 3.