SHORT SHARP TRAINING (monthly) issue 1201

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 Setting up Layers and Stories for Buildings

Setting up your layers correctly is essential if you want to use Vectorworks for BIM. Vectorworks 2012 has a new organizing concept called Stories which will require you to think carefully about how you organise your project into layers and stories.

Extended Podcast 142 - Click here

Beyond Beginner Session January 2012 - Rules for Classes

Extended Podcast 143 - Click here

Creating a Texture Bed site modifier.

Beginners Corner 036 - Click here

Layer Options

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Introduction

If you are using Vectorworks 2011 or prior, please refer to the earlier manual on setting up layers (issue 1002, February 2010).

Stories are a new organizing concept for Vectorworks 2012. It groups design layers to make it easier to adjust the different levels (stories) of a building. The stories also allow you to control building elements such as stairs, walls, and so on.

Stories

What Are Stories?

Stories is a way to control the layers that make up a building, grouping design layers together into levels of the building. They make it easy to adjust the elevations of all the levels of of the building, because Vectorworks knows how the stories relate to each other.

You should use **Stories** to control the elevation heights, design layers for modeling, and classes to control the visibility and graphic style of an object. If you are not familiar with layers and classes, please refer to the <u>Vectorworks Essential</u> <u>Manual</u>, which has a series of exercises to explain these.

Classes have not changed with the new Stories concept.

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Design layers have new settings, and a name change for some of the old settings.

	Edit Design L	ayers		
Name:	Floor-1			
Scale:	1:50	Scale)	
Stacking Order:	2			
Story:	Level-1	\$	J	
Elevation:	0	relative to the story		
	0	relative to the ground plane	2	
Layer Wall Height:	2450		_	
Level Type:	Finish Floor	r 🗘		
Opacity:		100 %		
Renderworks Backgro	ound: None	\$		
		Colors)	
	Saved V	views) Viewports))	

A story is a collection of design layers (foundation, slab, walls, and ceiling, and so on) that make up make up an entire level or floor of a building. The story settings control the elevation of each story relative to the other stories.



When you have two or more stories, you have two collections of design layers.

The story concept is flexible, and you can elect to use several design layers in one story.



The settings of each story are relative to each other. When you change the elevation of one story, you can choose to adjust other stories above or below.



If you have a multi-story building, each story is a collection of design layers.



Only work with the absolute minimum of layers in a story.



How Do Stories Work With Building Elements?

The real power of stories becomes obvious when you start using stories with building elements such as walls, stairs, and so on. You can link the top boundary to a layer floor above. You can link the bottom boundary to a layer below.

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When you edit the stories, and move the floor above, the objects bounded to layers above will automatically adjust. You have several options for linking the top and bottom boundaries of building elements. Beware, objects on one story do not adjust to (changed) geometry on another story but to the (changed) settings of that story!



This is going to be very powerful when creating multi-story buildings. Instead of having to adjust individual layers you'll be able to adjust complete stories, knowing that the walls, stairs, columns, and other building elements will automatically adjust to your changes.

When you set up the top and bottom bounding of building elements, you will notice that you can only link building elements to one layer. For example, a wall can only have the bottom boundary linked to one layer, so in a situation where you want to have two slab levels, you can only set the bottom of the wall to one of the slabs, the other slab misses out.



One solution is to use the command **Fit Walls to Roof...** This command will move the bottom of the wall to meet the 3D geometry on the selected layer. This command will only fit to the geometry on one layer.

These two issues suggest that you need to keep the number of layers you use to a minimum, and use classes to control visibility of the objects.

So when you are setting out a new building project you will be thinking of stories first rather than layers, and the layers being part of the stories. Keep the number of layers to a minimum.

How Do You Control Stories?

This section will look at the general concept of setting up stories, later on we will look at a few examples in detail.

Open the **Organization** dialog box by clicking on the **Layer** button. The **Design Layers** tab should be active.

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Click on the Stories tab.

Prefix/	Suffix Story Elevation	Layers viewports	Saved views Rel	erences
Prefix/	Suffix Story Elevation			
		n		
t	Delete	Defa	ult Story Layers	
	t)	t Delete	t Delete Defa	t Delete Default Story Layers)

As you have not created a story yet, nothing will show in the dialog box.

You need to change the elevation offset and the wall height for the floor and the foundation. You can change these later on the **Design Layer** tab, or you can change them now by clicking on the **Default Story Layers...** button.

						Details	O visibilities
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References
Story Name		Prefix/Sul	fix Story	Elevation			
New	Edit		Delete)	Defa	ault Story Layer	1
s the Default Sto	ory Lavers dialog.						

These are the default story layers, and Vectorworks has predetermined some of the names for the story layers. You do not have to accept these predefined names, you can create your own. You might notice that some of the heights do not suit your project either.

Name	Scale	Level Type	Elev Offset	Wall Ht
Ceiling	1:50	Ceiling	2550	0
Floor	1:50	Finish Floor	100	2450
Slab	1:50	Slab	0	2550
Roof	1:50	Roof	0	0
Foundation	1:50	Foundation	0	0

- Double-click on the Foundation layer.
- This will open the Edit Default Story Layer dialog box. You can change the name if you want, but this will affect all new story layers.
- Enter the desired **Elevation**. This is the elevation relative to the story. So for a foundation, the elevation may be a minus dimension.
- Enter the Layer Wall Height. This height is from the bottom of the story layer to the top of the wall.

Name:	Foundation	
Scale:	1:50	Scale
Elevation:	-450	relative to the story
Layer V(all Height:	350	
level Type:	Foundation	4

• Click on the Level Type pop-up menu. By default, Vectorworks uses a Finish Floor level type for all the walls, cabinets, doors and so on. Select the correct level type.

	Edit Default Story Layer
Name:	<none> New Level Type</none>
Scale:	Ceiling
Elevation:	Finish Floor ory
Layer Wall Height:	Floor Footing
Level Type:	✓ Foundation Roof
Sets the level type for the	Slab
	Top of Slab

• If you do not like the default names for the level types, you can create your own. Level Type names have to be unique, which means that you can not have two slab level types, but you could have lower -slab, mid-slab, and so on.

Name	Scale	Level Type	 Elev Offset 	Wall Ht
Roof	1:50	1-Roofs	0	0
Ceiling	1:50	2-Ceilings	2550	0
Floor	1:50	3-Walls	0	2464
Slab	1:50	4-Slab	0	0
Foundation	1:50	5-Foundation	-450	350
New	dit) (De	lete)		

- Click on the **OK** button to close the **Default Story Layer** dialog box.
- Double-click on the Floor layer.

- Enter the desired **Elevation**. This is the elevation relative to the story.
- Enter the Layer Wall Height.

Name	Scale	Level Type	Elev Offset	Wall Ht
Ceiling	1:50	Ceiling	2550	0
Floor	1:50	Finish Floor	100	2450
Slab	1:50	Slab	0	2550
Roof	1:50	Roof	0	0
Foundation	1:50	Foundation	0	0
New	dit De	lete		

- Click on the **OK** button to close the **Default Story Layer** dialog box.
- This has changed the default values and it will affect every story layer you create from now on.
- Click on the New... button to create a new story.

						 Details 	O Visibilities	
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Su	ffix Stor	Elevation				
Nev	Edit		Delete		Defa	ault Story Layer	s	
is a new story.								
								_

• The **New Story** dialog box opens. This is where you select the design layers that will make up the story and you also set the elevation of the story.

	Classes	Design Lavers	Stories	Sheet Lavers	Viewports	Saved Views	References	
	Ciasses	Design Expens	Stories	Sheet cayers	Tremporta	Sared Hens	herences	
Story Name		Prefix/Sul	Tix Stor	y Elevation				
Nev:	Edit		Delete		Defa	ault Story Layer	rs)	
-								
a new story.								

• You can select several layers, in which case your dialog box will look like this.

	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Sut	fix Stor	y Elevation				
Story-1		1		0	Ceiling-1 (Elev	2550)		
					Slab-1 (Elev: 0 Roof-1 (Elev: 0	0		
							K	
					Floor-1 (Ellev: 0	2]	TL II	0
					Foundation-1	Elev: -450]		·
New	Edit		Delete)	Defa	ult Story Layer	s)	

• Or you can select just a few layers. The story concept is flexible and allows you to have several layers of the story or just a few. One strategy is to use as few layers as possible and to use classes inside that layer to control information.

In this example, for a single-story house, there is no slab layer for the slab information. The slab could easily be assigned to classes to control its visibility and graphic style.

		Ec	lit Story	/	
Nar	me:		Story-	1	
Lay	er Name Suffix	\$	1		
Sto	ry Elevation:		0		
Cre	ate the following	g layers i	n this s	tory:	
	Name	Level	Туре	Elev Offset	V
	Ceiling-1	Ceilin	g	2550	
~	Floor-1	Finish	Floor	0	
~	Roof-1	Roof		0	
	Slab-1	Slab		0	
~	Foundation-1	Found	dation	-450	
			Ed	lit Default Sto	ory Layers)
				Cancel) Ок

• If you selected just a few layers your story dialog box could look like this.

						0	0
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References
Story Name		Prefix /Sul	fix Stor	v Elevation			
itory Name	1			0	Roof-1 [Elev: 0	0]	
					86 MALAN (1999 M		K
					Floor-1 [Elev: 0	[0	0
					Story-1		
					Foundation-1 [Elev: -450]	·
				~	(
New)	Edit		Delete)	Defa	ault Story Layers	s)

• If you wanted a two-story house, then you would add a new story above the first story. In the example below I have used one story for the walls and one story for the roof. This has created quite a simple layer structure for my file.

		Stories SI	heet Lavers	Viewports	Saved Views	References	
1970 Barrier 1987 B	o congineration						·
Story Name	Prefix/Su	ffix Story Ele	vation				
Story-2	2		2750	Roof-2 IElev: 0	n		
Story-1	1		0	100		N.	
				Floor-2 (Elev: 0	1		
				Ston/-2			2750
				Oldry-2			
				Charles of			0
				Story-1			
		*					
Nau	1	Delete		Defe	ult Stony Lavon		
THEW		Deleten		Dela	tunt Story Layer		

The story concept allows walls and other building elements to be automatically bounded to the adjoining story layers. This means that when the settings for those other layers change, the walls in this layer will automatically update to the new settings.

There are some situations where it is advisable to have a simple layout structure with few story layers. For example, if you have a floor with two different slab levels, you are unable to bound your walls automatically to these two levels.

<u>cadmovie776</u>



• The only way you can do this is to use the Fit Walls To Roof... command from the AEC menu.

Pillar... Floor... Roof Face... Create Roof... Objects from Polyline...

Fit Walls To Roof...

Create Polys from Walls... Space Planning Dimension Exterior Walls...

- When this dialog box opens you might notice that the dialogue box is actually called the Fit Selected Walls To 3D Geometry. So the Fit Walls To Roof command is actually used to fit walls to any 3-D geometry.
- If you want to constrain the bottom of a wall you can only constrain it to geometry in one layer. So if you have several slab layers (Slab-1, Lower Slab-1) you can only select one of these. This suggests that you should keep all of your slabs in the same layer.

Fit Selected Wall	s to 3D Geometry	
Constrain Tops of wa	alls to 3D geometry	
Fit to geometry on:	Floor-1 ‡]
Wall top embedding	depth: 0	
Constrain Bottoms	Floor-1	
Fit to geometry or	/ Slab-1	
	Lower Slab-1	
Curved wall fit interval:	500	×
Wall fitting reference:	Center 🛟	
Use this pull-down to select the la constraining 3D geometry.	yer on which to find the	1
	Cancel OK)

Here is the wall, correctly fitted to the two slabs.



Using the **Fit Walls To Roof...** command, you can easily fit the wall to several different slabs, provided that the slabs are all in the same layer.



When you are using wall bounding to the top or the bottom, a single wall can only bound to a single layer. This means that if you used three design layers for the three slab levels, the wall bottom would not be able to abound to all three slab layers, it would only bound to one of them.

This requires you to use the **Fit Walls To Roof...** command and as we have seen, if you want to use this command, the slabs have to be in the same design layer.



To summarize: when you are setting up your project with layers and stories, remember to keep it simple. Use classes to control the visibility of objects in these design layers.

Setting up Layers - 1 Floor 1 Roof

For a single level project, you might be wondering if you need to use stories at all. The answer is, you can easily manage without stories, but you can easily use them. Here is a simple project. One story of the building with a roof on it.

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• Open the **Organization** dialog box by clicking on the **Layer** button. The **Design Layers** tab should be active.

								O De	talls) visibilitie	5	
		Classes	Design La	yers St	ories	Sheet Layers	Viewport	ts Saved	Views	Reference	s	
Visibility		Design Layer 1	lame #	▲ Scale	Story	Level	Type	Elevation	Wall Ht	Colors	Opacity	Backg
T	~	Design Layer	-1	1 1:1			11	0	0		100	
					•							
New		Edit	Duplicat	e) (D	elete) (Preview)	Level	Types	Page	Setup)
New		Edit	Duplicat	e D	elete	Preview)	Level	Types	Page	Setup)

- Click on the **Stories** tab.
- Click on the New... button.

						• Details	Visibilities	
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Suf	fix Stor	y Elevation				
New	Edit		Delete)	Defa	ault Story Layer	s)	
s a new story.								

• Select the layers for the story. Remember to use the minimum number of layers.

• Notice that the Floor Elevation has used the original Vectorworks default. If you edit the Layer Type names and Layer Elevations, you have to save the file as a default to use the changes on every new project.

		N	ew Ston	1	
Va	me:		Story-	1	
ay	er Name Suffix	\$	1		
Sto	ry Elevation:		0		
Cre	ate the following	layers i	n this s	tory:	
	Name	Level	Туре	Elev Offset 🛛	-
	Ceiling-1	Ceilir	g	2550	
~	Floor-1	Finish	Floor	100	
	Slab-1	Slab		0	
~	Roof-1	Roof		0	
~	Foundation-1	Found	dation	0	
			Ed	lit Default Story	Layers
				Cancel	ОК

- You will need to change the elevation offset and the wall height for the floor and the foundation, but you can edit these later.
- Click on the **OK** button.
- The results of your created story is shown in the dialog box.

Classes Dr itory Name itory-1	esign Layers Stories Prefix/Suffix Sto 1	Sheet Layers	Details Viewports Saved View Floor-1 [Elev: 100]	○ Visibilities
Classes D	esign Layers Stories Prefix/Suffix Sto 1	Sheet Layers bry Elevation 0	Viewports Saved View Floor-1 [Elev: 100]	vs References
itory Name itory-1	Prefix/Suffix Sto	ory Elevation	Floor-1 [Elev: 100]	
tory-1	1	0	Floor-1 [Elev: 100]	
			Roof-1 [Elev: 0]	
			Frankling (15 mg O)	1
			Stop-1	
			- Gury-1	II ▼
New	Delete	2	Default Story Lay	ers
	Contraction		(stant biol) and	

• Click on the **Design Layers** tab. This is where you can edit the layer.

		Classes Design	Layers Sto	ories Shee	et Layers Viewp	oorts Saved	Views	Reference	s	
Visibility		Design Layer Name	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Backg
•		Floor-1	1 1:50	Story-1	Finish Fl	100	2450	911111111	100	
•		Roof-1	2 1:50	Story-1	Roof	0	0	201111111	100	
•		Foundation-1	3 1:50	Story-1	Foundat	0	0	11111111	100	
•	~	Design Layer-1	4 1:1			0	0	11/1////	100	
		*******)) •	•
New	D	Edit Dupli	icate De	ete)	Preview	Level	Types	Page	Setup)

• Double click on Floor-1 layer to edit the settings.

- Edit the Elevation, Layer Wall Height, and so on to suit your project.
- The Layer Wall Height for Floor-1 is the height from the slab to the bearing height of the roof.
- The Elevation for Floor-1 is the elevation of this layer above the story. Set this to **0**.

	Edit Design	Layers
Name:	Floor-1	
Scale:	1:50	Scale
Stacking Order:	1	
Story:	Story-1	•
Elevation:	0	relative to the story
10	0	relative to the ground plane
Layer Wall Height:	2450	8'
Level Type:	Finish Flo	or 🗘
Opacity:		100 %
Renderworks Backgro	und: None	•
Georeferenced	Saved	Colors Viewports Edit Georeferencing
Sets the design layer Z elevation of the selected design layer(s)	on (the base heig)	ht above the document active layer plane)
		Cancel OK

• Click on **OK** the button to return to the **Organization** dialog box.

- The Elevation for the roof layer should be the same as the floor supporting the roof. In this case the Elevation for the roof is 0.
- Notice that the original design layer (Design Layer-1) is still in the Organization dialog box. You might also notice that Vectorworks has ignored the scale of this layer, and created the new story layers at a default scale.

							١	Details () Visibiliti	es	
		Classes De	esign Layer	s S	tories	Sheet Layers Vie	wports Save	d Views	Reference	es	
Visibility		Design Layer Nam	ie # A	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Backg
•		Floor-1	1	1:50	Story-	1 Finish Fl	0	2450	200000 M	100	
1		Roof-1	2	1:50	Story-	1 Roof	0	0	201111111	100	
1		Foundation-1	3	1:50	Story-	1 Foundat	0	0	11111111	100	
•	~	Design Layer-1	4	1:1			0	0	11/1/1/1/	100	
New)	Edit)	Duplicate		elete	Preview	Leve	l Types	Page	Setup	

• If you can use this design layer (the site plan, for example) then edit the settings to suit. If you do not need this design layer, then delete it.

						O Det		visibilities		
		Classes Desig	n Layers Sto	ries Sheet	Layers Viewpo	orts Saved V	/iews R	eferences]	
Visibilit	,	Design Layer Name	# A Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Back
•		Roof-1	1 1:50	Story-1	Roof	0	0	11/1/1/1.	100	
		Floor-1	2 1:50	Story-1	Finish Fl	0	2450	1111/1111	100	
1		Foundation-1	3 1:50	Story-1	Foundat	0	0	2////////	100	
T	~	Site Plan	4 1:200			0	0	41111111	100	
)4	•
	.)	Edit Dup	olicate Del	ete)	Preview	(Level T	ypes)	Page Se	tup)	

- When you draw the walls, and create the walls styles set the walls to bound the Layer Wall Height for a single story project.
- Use the Fit Walls to Roof... command to fit the walls to the slope of the roof.



Setting up Layers - 2 Floors 1 Roof

For a 2 storey project, you should definitely use stories. Stories will make it easier to setup the layers of the project, they will also make it easier to control the walls and slabs. If there is a change to the heights of the building, stories will make it easy to change the project.

This is a simple project, 2 story building with one roof. This project needs a layer for the foundations, Floor-1, Floor-2, and the roof.

roof bearing ht Root-1 Broundations-1

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Two Story Building

• Open the **Organization** dialog box by clicking on the **Layer** button. The **Design Layers** tab should be active.

						Details	○ Visibilities	
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Suf	fix Stor	y Elevation				
New	Edit		Delete)	Defa	ult Story Layer	<u>s</u>)	
							(

- Click on the **Stories** tab.
- Click on the New ... button.
- Select the layers for the lower story. Vectorworks assumes that you will start at the lower story and work your way up the building. Remember to use the minimum number of layers.
- Notice that the Floor Elevation is using the original Vectorworks default names. You will need to change the elevation offset and the wall height for the floor and the foundation, but you can edit these later.
- Click on the **OK** button.

		Ne	ew Story	/				
Nai	me:		Story-1					
Lay	ver Name Suffix	+	1					
Sto	ry Elevation:		0					
Cre	ate the following	g layers i	in this s	tory:				
	Name	Level	Туре	Elev Offset	V			
	Ceiling-1	Ceilin	ng	2550				
~	Floor-1	Finish	1 Floor	100				
	Slab-1	Slab		0				
	Roof-1	Roof		0				
~	Foundation-1	Found	dation	0				
			Ed	it Default Sto	ry Layers			
				Cancel	ОК			

The first story is completed.

	-								
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References		
Story Name		Prefix/Su	ffix Stor	v Elevation					
Story-1		1		0	Floor-1 (Elev:	1001			
							N		
					Foundation-1	[Elev: 0]			
					Story-1	Non-Balancia - A			
Nau			Delete	2	Def	with Change Lawren			
New	Edit		Delete		Defa	aunt Story Layer	····		

• Click on the **New...** button.

				Organizatior				
					 Details Visibilities 			
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Sul	fix Stor	Elevation				
Story-1		1		0	Floor-1 [Elev: 1	100]		
					Story-1			
New.	Edit		Delete)	Defa	ault Story Laye	rs)	
- N								

• Select the layers for the story. Remember to use the minimum number of layers.
• You will need to change the elevation offset and the wall height for the floor and the foundation, but you can edit these later.

		N	ew Ston	/				
Na	me:		Story-	2				
Lay	ver Name Suffix	\$	2					
Sto	ry Elevation:		2850					
Cre	ate the following	layers i	n this s	tory:				
	Name	Level	Туре	Elev Offset	V			
	Ceiling-2	Ceilir	g	2550				
~	Floor-2	Finish	Floor	100				
	Slab-2	Slab		0				
~	Roof-2	Roof		0				
	Foundation-2	Found	dation	0				
			Ed	lit Default Sto	ory Layers			
				Cancel	ОК			

• Set the correct Story Elevation.

		N	ew Story	1					
Nar	me:		Story-2	2					
Lay	er Name Suffix	\$	2						
Sto	ry Elevation:		2464mm (8'1")						
Cre	ate the following	layers i	n this s	tory:					
	Name	Level	Туре	Elev Off	set 🔻				
	Ceiling-2	Ceilir	g	2550					
~	Floor-2	Finish	Floor	100		- 11			
	Slab-2	Slab		0		- 11			
1	Roof-2	Roof		0					
	Foundation-2	Found	dation	0		_			
			Ed	lit Defaul	t Story La	yers			
				Can	cel 🤇	ОК			

• Click on the **OK** button.

The results of your story is shown in the dialog box.

							-	
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Su	ffix Story	y Elevation				
Story-2		2		2464	Floor-2 (Floor 1	001		
					Story-2 Story-1	1		0
New	Edit		Delete)	Defa	ult Story Layers	i)	1A

- Click on the **Design Layers** tab. This is where you can edit the layer.
- Double click to the Foundation-1 layer to edit the settings.

	Edit Design Layers
Name:	Foundation-1
Scale:	1:50 Scale
Stacking Order:	4
Story:	Level-1
Elevation: (-18")	-450 relative to the story
	-450 relative to the ground plane
Layer Wall Height:	350 (-14")
Level Type:	Foundation
Opacity:	100 %
Renderworks Backgrou	nd: None
	Colors
	Saved Views Viewports
Georeferenced	Edit Georeferencing
	Cancel OK

• Edit the **Elevation, Layer Wall Height**, and so on to suit your project.

The Layer Wall Height for Foundation-1 is the height from the bottom of the foundations to the underside of the slab.

The Elevation for Foundation-1 is measured from the top of the slab on Floor-1.

• Click on the OK button.

	Classes	esion Lavers	Stories	Sheet Lavers	Viewports Saved	Views Referen	ras	
	Classes D	esign cayers	Stories	Sheet Layers	viewports Saved	views Referen	ices	
Visibility	Design Layer Nar	ne # 🔺 So	ale	Story	Level Type	Elevation	Wall Ht	Colors
•	Roof-2	1 1:	50	Level-2	Roof	2710	0	2000
•	Floor-2	2 1:	50	Level-2	Finish Floor	2710	2440	11111
•	Floor-1	3 1:	50	Level-1	Finish Floor	0	2710	11111
•	Foundation-1	4 1:	50	Level-1	Foundation	-450	350	1////
)4 F
) (Edit) (Duplicate) (Delete	Preview) (Level T	ypes Pag	e Setup.	.)

• Double click to the Floor-1 layer to edit the settings.

	Edit Design Layers
Name:	Floor-1
Scale:	1:50 Scale
Stacking Order:	3
Story:	Story-1
Elevation:	0 relative to the story
	0 relative to the ground plane
Layer Wall Height:	2464 (8'1")
Level Type:	Finish Floor
Opacity:	100 %
Renderworks Backgro	ound: None
	Colors
	Saved Views Viewports
Georeferenced	Edit Georeferencing

• Edit the Elevation, Layer Wall Height, and so on to suit your project.

The **Layer Wall Height** for **Floor-1** is the height from the slab to the start of Floor-2.

The **Elevation** for **Floor-1** is the project level for that story. I usually set this to 0 for this floor.

• Click on the **OK** button to return to the **Organization** dialog box.

		Classes Desig	gn Layers Sto	ries Sheet	Layers Viewpo	orts Saved \	liews R	eferences]	
Visibili	ty	Design Layer Name	# A Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Bac
•		Floor-2	1 1:50	Story-2	Finish Fl	2564	2450	11/1////	100	
•		Roof-2	2 1:50	Story-2	Roof	2464	0	-1111/1111.	100	
•		Floor-1	3 1:50	Story-1	Finish Fl	0	2464	4///////	100	
•		Foundation-1	4 1:50	Story-1	Foundat	0	0	41111111	100	
New)	Edit Du	plicate Del	ete) (Preview	Level T	ypes)	Page Se	tup)	

• Double click on Floor-2 layer to edit the settings.

	Edit Design Layers	
Name:	Floor-2	
Scale:	1:50 Scale	.)
Stacking Order:	1	
Story:	Story-2	\$
Elevation:	0 relative to the story	
	2464 relative to the ground pla	ane
Layer Wall Height:	2489 (8'2")	
Level Type:	Finish Floor	\$
Opacity:	····· · · · · · · · · · · · · · · · ·	
Renderworks Backgro	ound: None	\$
	Colors	\supset
	Saved Views Viewports	.)
Georeferenced	Edit Georeferencing.	.)

• Edit the **Elevation**, **Layer Wall Height**, and so on to suit your project.

The **Layer Wall Height** for **Floor-2** is the height from the floor to the bearing height of the roof.

The **Elevation** for **Floor-2** is the elevation of this layer above the story height. Set this to 0.

• Click on the **OK** button to return to the **Organization** dialog box.

The **Elevation** for the **Roof Laye**r should be the same as the floor supporting the roof.

• Notice that the original design layer (**Design Layer-1**) is still in the **Organization** dialog box. You might also notice that Vectorworks has ignored the scale of this layer, and created the new story layers at a default scale (1:50).

		Classes Desig	n Layen	s Sto	ries Sheet	Layers Viewpor	ts Saved V	iews R	leferences]	
Visibili	ty	Design Layer Name	# ▲	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Bac
•		Floor-2	1	1:50	Story-2	Finish Fl	2464	2489		100	
•		Roof-2	2	1:50	Story-2	Roof	2464	0	Millilla	100	
•		Floor-1	3	1:50	Story-1	Finish Fl	0	2464		100	
•		Foundation-1	4	1:50	Story-1	Foundat	0	0	11111111	100	
									middiadadad		
New)	Edit Dup	licate	Del	ete) (Preview	(Level T	ypes)	Page Se) 4 tup)	•

• If you can use this design layer (the site plan, for example) then edit the settings to suit. If you do not need this design layer, then delete it.

		Classes Desig	gn Layers Sto	ories Sheet	Layers Viewports	Saved V	/iews R	leferences]	
Visibilit	y	Design Layer Name	# 🔺 Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Back
•		Roof-1	1 1:50	Story-1	Roof	0	0	2///////	100	
1		Floor-1	2 1:50	Story-1	Finish Fl	0	2450	11111111	100	
•		Foundation-1	3 1:50	Story-1	Foundat	0	0	·////////	100	
•	~	Site Plan	4 1:200			0	0	11111111	100	
					Provinu	Level T	unes	Page Se) 4	•
New.		Edit Dur	olicate De	lete	Fleview	(Lerer I	pesin	(age be		

• When you draw the lower walls, create the walls styles to set the walls to bound the level above.



Here are the wall style settings.



Here is the wall in the design layer.



- When you draw the upper walls, create the walls styles to set the walls to bound Layer Wall Height. This suggests that you will need a separate wall style for the walls on the lower floors and for the upper floors.
- Use the Fit Walls to Roof... command to fit the walls to the slope of the roof.



Here is a view of the wall in the design layer.



Setting up Layers - 2 Floors 2 Roofs

A 2 story building project with two roofs. The setting up for this project is almost the same as the previous project, with the addition of a roof layer to the lower story.

cadmovie779



• Open the **Organization** dialog box by clicking on the **Layer** button. The **Design Layers** tab should be active.

				Organization	L.			
						 Details 	○ Visibilities	
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References	
Story Name		Prefix/Sul	ffix Stor	y Elevation				П
New	Edit		Delete	C	Defa	ault Story Laye	rs)	
s a new story.								
							Cancel	0

- Click on the **Stories** tab.
- Click on the New ... button.
- Select the layers for the lower story. Vectorworks assumes that you will start at the lower story and work your way up the building. Remember to use the minimum number of layers, but remember to add a roof layer for the lower story.
- You need to change the elevation offset and the wall height for the floor and the foundation later.

		New Stor	У	Visibilities
Classes Design	Name:	Story-	1	References
Story Name	Layer Name Suffix	\$ 1		
	Story Elevation:	0		
	Create the following	layers in this s	tory:	
	Name	Level Type	Elev Offset 🔻	
	Ceiling-1	Ceiling	2550	
	Slab-1	Slab	0	
	✔ Roof-1	Roof	0	
	✓ Foundation-1	Foundation	0	
		E	lit Default Story Layers.	
New) (Edit)				
			Cancel OK	

- Click on the **OK** button.
- Click on the New... button.
- Select the layers for the Story-2.

		New Stor	у	Visibilities	
Classes Design	Name:	Story-	2	teferences	
Story Name	Layer Name Suffix	2			
Story-1	Story Elevation:	2690	(8'10")		
	Create the following	layers in this s	story:		
	Name	Level Type	Elev Offset 🔻		
	Ceiling-2	Ceiling	2550		
	✓ Floor-2	Finish Floor	100		
	Slab-2	Slab	0		
	✓ Roof-2	Roof	0		
	Foundation-2	Foundation	0		
		E	dit Default Story Layers.		
New Edit					
			Cancel OK		

• Click on the **OK** button.

	Classes	Design Lavers	Stories	Sheet Lavers	Viewports	Saved Views	References	
		o congre auj ero	0.0	Sincer any cro	Therefores	build include		
Story Name		Prefix/Su	fix Stor	y Elevation				
Story-2		2		2690	Floor-2 (Elev:	1001		
Story-1		1		0	7.0		M	
					Roof 2 Flow	1		
					Step: 2	-		2690
					Slory-z			
							_	0
					Story-1			
			Delate	-	(D.f	In Change I		
New	Edit		Delete		Defa	ault Story Layer	s	

• Change to the **Design Layer** tab.

Visibilit	/	Design Layer Name	# #	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity Bac
•		Floor-2	1	1:50	Story-2	Finish Fl	2790	2450	11111111	100
6		Roof-2	2	1:50	Story-2	Roof	2690	0	11111111	100
1		Floor-1	3	1:50	Story-1	Finish Fl	100	2450	2010000	100
•		Roof-1	4	1:50	Story-1	Roof	0	0		100
1		Foundation-1	5	1:50	Story-1	Foundat	0	0		100
			***)4 F
New.	.)	Edit Dup	olicate	Del	ete)	Preview	Level T	ypes)	Page Se	tup)

• Double click on Floor-1 layer to edit the settings.

• Edit the **Elevation**, **Layer Wall Height**, and so on to suit your project.

	Edit Design Layers
Name:	Floor-1
Scale:	1:50 Scale
Stacking Order:	3
Story:	Story-1
Elevation:	0 relative to the story
	0 relative to the ground plane
Layer Wall Height:	2450
Level Type:	Finish Floor
Opacity:	100 %
Renderworks Backgro	und: None
	Colors
	Saved Views Viewports
Georeferenced	Edit Georeferencing

- Click on the **OK** button.
- Double click on Floor-2 layer to edit the settings.

	Edit Design Layers
Name:	Floor-2
Scale:	1:50 Scale
Stacking Order:	1
Story:	Story-2
Elevation:	0 relative to the story
	2690 relative to the ground plane
Layer Wall Height:	2450
Level Type:	Finish Floor
Opacity:	100 %
Renderworks Backgro	ound: None
	Colors
	Saved Views Viewports
Georeferenced	Edit Georeferencing

- Edit the **Elevation**, **Layer Wall Height**, and so on to suit your project.
- Click on the **OK** button.

Visibilit	N.	Design Laver Name		Scale	Story	Level Type	Elevation	Wall Ht	Colors	Onacity	Baci
•	• 7	Floor-2	1	1:50	Story-2	Finish Fl	2690	2450	201013	100	Daci
		Roof-2	2	1:50	Story-2	Roof	2690	0	1111111	100	
•		Floor-1	3	1:50	Story-1	Finish Fl	0	2450		100	
•		Roof-1	4	1:50	Story-1	Roof	0	0	1111111	100	
•		Foundation-1	5	1:50	Story-1	Foundat	0	0	2////////	100	
	~	Design Layer-1	6	1:1			0	0		100	
			***)4	F.
New)	Edit Du	plicate	Delet	e)	Preview	Level T	ypes)	Page Se	tup)	

- Notice that the original design layer (**Design Layer-1**) is still in the **Organization** dialog box.
- If you can use this design layer (the site plan, for example) then edit the settings to suit. If you do not need this design layer, then delete it.

		Classes Desig	n Layers	Stor	ries Sheet I	Layers Viewpo	rts Saved V	liews R	eferences]	
Visibility		Design Layer Name	# A	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Back
•		Floor-2	1	1:50	Story-2	Finish Fl	2690	2450	"	100	
-		Roof-2	2	1:50	Story-2	Roof	2690	0	1111/111	100	
1		Floor-1	3	1:50	Story-1	Finish Fl	0	2450		100	
		Roof-1	4	1:50	Story-1	Roof	0	0	1111/111	100	
		Foundation-1	5	1:50	Story-1	Foundat	0	0	2////////	100	
-	~	Site Plan	6	1:200			0	0	UNITIMA.	100	
				_						1	
	_										-
New	0	Edit Dup	licate	Dele	ete)	Preview	Level T	ypes)	Page Se	tup)	

• When you draw the lower walls, create the walls styles to set the walls to bound the level above.



These are the wall style settings.

	Wall Preferences
Wall Style: <pre></pre>	Save Preferences as Wall Style
Def	finition Insertion Options Data
Height	
Height:	0
Top Bound:	Finish Floor [Story Above]
Top Offset:	0
Bottom Bour	nd: Layer Elevation
Bottom Offs	et: 0
Caps:	Both
Class:	Wall-Proposed
Control Offset:	0

Here is the wall in the **Floor-1** design layer.



• When you draw the upper walls, create the walls styles wall style style so that the walls bind to **Layer Wall Height**. This suggests that you will need a separate wall style for the walls on the lower floors and for the upper floors.

- If you use the same wall style as the lower floors your walls will have zero height until you use the **Fit Walls to Roof...** command.
- For the walls on the upper floor, use the **Fit Walls to Roof...** command to fit the walls to the slope of the roof.



Here is a view of the wall in the **Floor-2** design layer.



Setting up Layers - 3 Floors 2 Roofs

Setting up a project with 3 levels and 2 roofs is similar to the previous project with 2 roofs, you just need an extra story at the lower level .

cadmovie780



• Open the **Organization** dialog box by clicking on the **Layer** button. The **Design Layers** tab should be active.

- Click on the Stories tab.
- Click on the New... button.
- Select the layers for the lower story. Vectorworks assumes that you will start at the lower story and work your way up the building. Remember to use the minimum number of layers, but remember to add a roof layer for the middle story.
- You need to change the elevation offset and the wall height for the floor and the foundation later.

		New Stor	y	
Classes	Name:	Story-	1	ws References
Story Name	Layer Name Suffix	• 1		
	Story Elevation:	0		
	Create the following	layers in this s	tory:	
	Name	Level Type	Elev Offset 🔍	
	Ceiling-1	Ceiling	2550	
	Slab-1	Slab	0	
	Roof-1	Roof	0	
	✓ Foundation-1	Foundation	0	
	-	Ec	lit Default Story Layers	
New Edit				yers

- Click on the New... button.
- Select the layers for this story.

		New St	ory	s Visibilities
Classes	Name:	Stor	y-2	ws References
Story Name	Laver Name Suffix	× 2 2		
Story-1			-	
	Story Elevation:	290	0	>0
	Create the followin	g layers in this	story:	5
	Name	Level Type	Elev Offset 🔻	
	Ceiling-2	Ceiling	2550	
	✓ Floor-2	Finish Floor	100	
	Slab-2	Slab	0	
	✓ Roof-2	Roof	0	
	Foundation-2	Foundation	0	
	_	C	Edit Default Story Layers.	
New Edit				yers
preview.				

- Click on the **OK** button.
- Click on the New... button.
- Select the layers for this story.

	11	New Stor	y	s Ovisibilities
Classes	Name:	Story-	3	ws References
Story Name	Layer Name Suffix	3		
Story-2	Story Elevation	2900	+2800	
Story-1	Create the following	lavers in this s	topy	
	Name	Level Type	Elev Offset	2900
	Ceiling-3	Ceiling	2550	
	✓ Floor-3	Finish Floor	100	0
	Slab-3	Slab	0	
	✓ Roof-3	Roof	0	
	Foundation-3	Foundation	0	
		Ec	lit Default Story Layers.	
New) Edit	Enter the story elevation.			yers
e document's stories.			Cancel OK	

• Click on the **OK** button.

Here are the stories.

_	_			Organization	1			_
						 Details 	⊖ Visibilities	
	Classes	Design Layers	Stories	Sheet Layers	Viewports	Saved Views	References]
Story Name		Prefix/Sul	fix Stor	y Elevation				
Story-3		3		5700	Floor-3 (Elev: 1	1001		
Story-2		2		2900			N.	
Story-1		1		0	Roof-3 [Elev: 0	0]	No.	5700
					Story-3			5700
								2900
					Story-2			
					Story-1			0
						h,		
New	Edit		Delete		Defa	ault Story Layer	s)	
preview.								
							Can	
							Can	

• Change to the **Design Layer** tab.

	Classes Desi	gn Layer	s Storie	s Sheet I	ayers Viewports	Saved Vie	ws R	eferences]	
Visibility	Design Layer Name	# A	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Back
•	Floor-3	1	1:50	Story-3	Finish Fl	5800	2450	20101011	100	
-	Roof-3	2	1:50	Story-3	Roof	5700	0	1111/1111	100	
•	Floor-2	3	1:50	Story-2	Finish Fl	3000	2450	4///////	100	
•	Roof-2	4	1:50	Story-2	Roof	2900	0	91111111	100	
1	Floor-1	5	1:50	Story-1	Finish Fl	100	2450	2////////	100	
					۴					
						<u></u>	_	() 4	•
New	(Edit) (Du	plicate	Delet	e)	Preview	Level Typ	es)	Page Se	tup)	

- Double click on **Floor-1** layer to edit the settings as required.
- Edit the **Elevation**, **Layer Wall Height**, and so on to suit your project.

	Edit Design L	ayers
Name:	Floor-1	
Scale:	1:50	Scale
Stacking Order:	5	
Story:	Story-1	\$
Elevation:	0	relative to the story
	0	relative to the ground plane
Layer Wall Height:	2900	
Level Type:	Finish Floor	•
Opacity:		100 %
Renderworks Backgro	ound: None	
		Colors
	Saved V	'iews) Viewports)
Georeferenced		Edit Georeferencing

• Click on the **OK** button.

		Classes Design	Layers	Sto	ries Sheet I	Layers Viewpo	rts Saved V	liews R	eferences]	
Vicibility		Design Lawer Name		Scale	Stopy	Level Turne	Elevation	Wall Ht	Colors	Onarity	Raci
Re l	-	Eloor=3	1	1.50	Story-3	Finish Fl	5800	2450	2777777777	100	Dacr
1		Roof-3	2	1:50	Story-3	Roof	5700	0		100	
Ð		Floor-2	3	1:50	Story-2	Finish Fl	3000	2450		100	
•		Roof-2	4	1:50	Story-2	Roof	290	0	1111111	100	
		Floor-1	5	1:50	Story-1	Finish Fl	0	2900	2////////	100	
6	~	Design Layer-1	6	1:1			0	0		100	
)4	•
New.		Edit Dupl	icate	Del	ete	Preview	Level T	ypes)	Page Se	tup)	

• Double click on Floor-2 layer to edit the settings.

	Edit Design	Layers
Name:	Floor-2	
Scale:	1:50	Scale
Stacking Order:	3	
Story:	Story-2	\$
Elevation:	0	relative to the story
	2900	relative to the ground plane
Layer Wall Height:	2800	
Level Type:	Finish Flo	or 🗘
Opacity:		100 %
Renderworks Backgro	und: None	\$
		Colors
	Saved	Views Viewports
Georeferenced		Edit Georeferencing

- Edit the **Elevation**, **Layer Wall Height**, and so on to suit your project.
- Click on the OK button.

Visibilit	ty	Design Layer Name # A Sca		Scale	Story	Level Type	Elevation Wall Ht		t Colors	Opacity	Back
•		Floor-3	1	1:50	Story-3	Finish Fl	5800	2450	11/1////	100	
1		Roof-3	2	1:50	Story-3	Roof	5700	0	1111/1111	100	1
•		Floor-2	3	1:50	Story-2	Finish Fl	2900	2800	:////////	100	
T		Roof-2	4	1:50	Story-2	Roof	2900	0	4111/11/	100	
1		Floor-1	5	1:50	Story-1	Finish Fl	0	2900	4///////	100	
		Design Layer-1	0				0	0	W.L.L.L.L.COM	100	
_		******)•	E.
New.)	Edit Du	plicate	Delet	te)	Preview	Level T	ypes)	Page Se	tup)	

• Double click to the Floor-3 layer to edit the settings.

	Edit Design Layers
Name:	Floor-3
Scale:	1:50 Scale
Stacking Order:	1
Story:	Story-3
Elevation:	0 relative to the story
	5700 relative to the ground plane
Layer Wall Height:	2450
Level Type:	Finish Floor
Opacity:	100 %
Renderworks Backgro	ound: None 🗘
	Colors
	Saved Views Viewports
Georeferenced	Edit Georeferencing

• Notice that the original design layer (Design Layer-1) is still in the Organization dialog box. If you can use this design layer (the site plan, for example) then edit the settings to suit. If you do not need this design layer, then delete it.

		Classes	Design Layers	Storie	s Sheet	Layers Viewpor	ts Saved	/iews R	eferences]	
Visibility	,	Design Layer	Name # 🔺	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Back
•		Floor-3	1	1:50	Story-3	Finish Fl	5700	2450	11111111	100	
		Roof-3	2	1:50	Story-3	Roof	5700	0	1111/111	100	
1		Floor-2	3	1:50	Story-2	Finish Fl	2900	2800		100	
•		Roof-2	4	1:50	Story-2	Roof	2900	0	41111111	100	
•		Floor-1	5	1:50	Story-1	Finish Fl	0	2900	2////////	100	
•	~	Site Plan	6	1:200			0	0	11111111	100	
_				_)4	•
New	.)	Edit	Duplicate	Delete		Preview	Level T	ypes)	Page Se	tup)	

• When you draw the lower walls, create the walls styles to set the walls to bound the level above.



These are the wall style settings.

	Wall Preferences
Wall Style:	Save Preferences as Wall Style
Definitio	n Insertion Options Data
Height	
Height:	0
Top Bound:	Finish Floor [Story Above]
Top Offset:	0
Bottom Bound:	Layer Elevation
Bottom Offset:	0
Caps: Both	h 😯
Class: Wal	I-Proposed
Control Offset: 0	

Here is the wall in the design layer.



When you draw the upper walls, create the walls styles wall style style so that the walls bind to **Layer Wall Height**. This suggests that you will need a separate wall style for the walls on the lower floors and for the upper floors.

If you use the same wall style as the lower floors your walls will have zero height until you use the **Fit Walls to Roof...** command.

• Use the **Fit Walls to Roof...** command to fit the walls to the slope of the roof.



Here is a view of the wall in the design layer.



Setting up Layers - Multiple Levels

This is a two story building project, with multiple levels, but only one roof. The setting up of the layers is easy enough, but drawing the walls requires careful work. You can get Vectorworks to follow the slab above and below using **Fit Walls to Roof...**

cadmovie781



- Open the **Organization** dialog box by clicking on the **Layer** button. The **Design Layers** tab should be active.
- Click on the Stories tab.
- Click on the New... button.

• Select the layers for **Story-1**. Vectorworks assumes that you will start at the lower story and work your way up the building. Remember to use the minimum number of layers.

		ſ	vew Story		tans Visibilities		
Classes	Name:		Story-1	0		Views Refe	rences
Story Name	Layer Name	Suffix 🛟	1				
	Story Elevat	ion:	0				
	Create the f	ollowing layers	in this st	ory:			
	Name	Leve	Type	Elev Offset	v		
	Ceiling-1	Ceil	ing	2550			
	✓ Floor-1	Fini	sh Floor	100			
	Boof-1	Sian	f	0			
	✓ Foundation	on-1 Fou	ndation	0			
			Ed	t Default St	ory Layers)		
New Edit						Layers	
				Cancel	OK		

• Create the next story.

Classes	Name:	Story-	2	Views References	
Stony Name	Layer Name Suffix	\$ 2			
Story-1	Story Elevation:	2900		1	
	Create the following	K			
	Name	Level Type	Elev Offset 🔻		
	Ceiling-2	Ceiling	2550		
	✓ Floor-2	Finish Floor	100		
	✓ Roof-2	Roof	0		
	Foundation-2	Foundation	0		
		Ed	lit Default Story Layers		
New Edit				Layers	
			(Cancel) (OV		

- Click on the **OK** button.
- The results of your stories is shown in the dialog box.

	Classes	Decign Lawore	Storios	Shoot Laworr	Viewporte	Saved Views	Poforoncor	
	Classes	Design Layers	Stories	Sheet Layers	viewports	Saved views	References	
Story Name		Prefix/Sul	ffix Stor	y Elevation				
Story-2		2		2900	Floor 2 Floor 1	001		
					Roof-2 (Elev: 0 Story-2 Story-1	I		<u>2900</u>
New)	Edit		Delete)	Defa	ult Story Layers	s	

- Change to the **Design Layer** tab.
- Double click to the Floor-1 layer to edit the settings.
- Edit the Elevation, Layer Wall Height, and so on to suit the project.
| Edit Design Layers | | | | | |
|------------------------------|--------------------------------|--|--|--|--|
| Name: | Floor-1 | | | | |
| Scale: | 1:50 Scale | | | | |
| Stacking Order: | 3 | | | | |
| Story: | Story-1 | | | | |
| Elevation: | 0 relative to the story | | | | |
| | 0 relative to the ground plane | | | | |
| Layer Wall Height: | 2900 | | | | |
| Level Type: | Finish Floor | | | | |
| Opacity: | 100 % | | | | |
| Renderworks Background: None | | | | | |
| | Colors | | | | |
| | Saved Views Viewports | | | | |
| Georeferenced | Edit Georeferencing | | | | |

- Click on the **OK** button.
- Change to the **Design Layer** tab.
- Double click to the Floor-2 layer to edit the settings.
- Edit the **Elevation**, **Layer Wall Height**, and so on to suit the project.

Edit Design Layers					
Name:	Floor-2				
Scale:	1:50 Scale				
Stacking Order:	1				
Story:	Story-2				
Elevation:	0 relative to the story				
	2900 relative to the ground plane				
Layer Wall Height:	2450				
Level Type:	Finish Floor				
Opacity:	100 %				
Renderworks Background: None					
	Colors				
	Saved Views Viewports				
Georeferenced	Edit Georeferencing				

• Click on the **OK** button.

		Classes Desig	on Layers	Sto	ries Sheet	Layers Viewpo	rts Saved V	/iews R	eferences]	
Visibility	,	Design Layer Name	# A	Scale	Story	Level Type	Elevation	Wall Ht	Colors	Opacity	Back
•		Floor-3	1	1:50	Story-3	Finish Fl	5800	2450	MIIIII.	100	
1		Roof-3	2	1:50	Story-3	Roof	5700	0	1111/1111	100	
T		Floor-2	3	1:50	Story-2	Finish Fl	3000	2450	2////////	100	
1		Roof-2	4	1:50	Story-2	Roof	2905	0	41111111	100	
1		Floor-1	5	1:50	Story-1	Finish Fl	0	2900	11/11/11.	100	
9	•	Design Layer-1	6	1:1			0	0		100	
New	.)	(Edit) (Dup	olicate	Del	ete) (Preview	(Level T	ypes)	Page Se) 4 tup)	F.
	_			_							

- Edit the Elevation, Layer Wall Height, and so on to suit your project.
- Click on the **OK** button.

The most important issue is how you set the **Top Bound** for the walls in your lower stories.



If you set the top bounding to the layer above and use **Fit Walls to Roof...**, the walls will change when you edit the story heights.



You can create the slab levels before or after the walls, but for this example, I have created the slabs first.



• The wall style should set the **Top Bound** to the wall layer above. This is important. If you do not set the wall to bound to the layer above, the walls will not change when you edit the story elevations.

	Wall Preferences		
all Style: Unstyled>	:	Save Preferences	as Wall Style
Def	inition Insertion Ontions	Data	
De	internet of the second options	Data	
Height			
Height:	0		
Top Bound:	Finish Floor [Story Abo	ove]	
Top Offset:	0		
Bottom Bou	nd: Foundation	•	
Bottom Offs	et: 0		
Caps:	Both	•	k
Class:	Wall-Existing	•	
Control Offset:	0		

The top of the highest of the three slabs is at elevation 0 for the floor level. The other two slabs are set down from there.



• Notice how the walls do not automatically follow the changes in slab level when you draw them.



When the walls are completed, they do not follow the changes in slab level, nor the slab levels of the floor above. When you set the walls to bound to the level above, Vectorworks sets the walls to the layer settings, not the 3D geometry of the objects in that layer.



To get the walls to fit to the 3D geometry, use the **Fit Walls To Roof...** command.

- Select the walls.
- Go to the Menu bar.
- Choose AEC > Fit Walls To Roof...

Pillar Floor Roof Face Create Roof Objects from Polylin	e
Windoor	►
Convert to VAA Title	Blocks
Fit Walls To Roof	
Create Polys from W	al⊠
Space Planning	▶
Dimension Exterior	Walls

• Constrain the tops of the walls to the 3D geometry on the layer above, and constrain the bottoms of the walls to the 3D geometry on the layer with the slabs.



Here is the result.



Repeat this process for the upper floor. You need to have the roof and slabs in place before you use the **Fit Walls To Roof...** command.