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QUICKSTART COURSE - MODULE 3 – PART 4

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Hello, this is Eric Bobrow. And in this lesson, we're going to add an upper story above the ground floor that we've been working on, and pop in some doors and windows, add some floors to support those walls, and then cut some sections. So let's get started. [0:15]

We're looking at the first floor or the ground floor plan, and I'm going to go and double click in the View Map the second floor or story above. I'd like to see the story below, so I can coordinate and line things up properly. So I'll right click on it in the View Map and say, "Show as Trace Reference." If you're in ArchiCAD 10, that would be called, "Show as Ghost Story". Now, I'm going to go and use the eyedropper, and pick up the settings of the wall down below, the exterior wall, by hovering over it. And then when I see that it's paying attention to it, that it's on top of the edge, I'll click, and that switches me from the Door tool that I was in to the Wall tool with the proper settings. [0:59]

Now, I'm going to go and place a wall that's in line with this lower left wall here, that I'm gesturing at, and the back wall. In order to see where they would line up or connect virtually, I'll position my mouse over the edge of this wall, and then click on the orange ball that shows up. Now, that's in ArchiCAD 15. If you're an ArchiCAD 10-14, you simply slide along the edge, and the dashed blue line will become a dashed orange line like you're seeing here. [1:28]

Now, when I position my cursor over the edge of the upper wall, you'll see the three line Mercedes cursor indicating I'm on the edge. When I slide over very carefully, you'll see it change to this intersection snap with a little tiny dot in the middle of an X. I'll click on that to start drawing this wall and I notice that the wall is actually positioned on the wrong side of this line. I'd like it to be on the inside. So I'll switch the construction method right here on the fly, which you can do at any time. [2:01]

So now I'll be able to go down, and I'll simply position my mouse on the guideline, so I'm not going nice and cleanly on the axis, and type in the distance, which will be 16 feet 7 1/2, so 16 feet 7 space 1 slash 2. And then I'll hit Enter. That would be 5100 mm. And now I'll go to the right here, and this will be 14 feet, or 4,350. And go up in this direction here, and this is 3,450, I'm sorry that's 11'3", 11 feet 3 inches or 3,450. Then I will take it back in this direction here, and I could type in the value, but I could also just in this case snap it to the edge of the wall. You can see it says 4 foot 6 inches, or that would be in the metric one 1,400 millimeters. [3:09]

So I can just click on that intersection point and go up to the corner here along this edge. Now, it looks like it's trying to snap to something, and it's not quite on the right angle. You'll notice the angle says

0.89. So I'm going to zoom in on this by rolling my mouse wheel carefully, and then I'm going to be able to actually snap with the angle easily. I think what was happening is it was snapping to the midpoint of that wall, which wasn't quite on the same point as this intersection. So sometimes you need to zoom in even in the middle of an operation. [3:47]

Now I'll click, and here it's the 5 feet 4 1/2 at zero. Or that would be 1,650. And then I'll zoom out a little bit by rolling the mouse wheel, and go back to the starting point. So if I've successfully done this all in one sequence, then I will get a hammer icon. On the other hand, if you have done this in more than once step, then you just get a normal black pencil or checkmark. But the distance is 9 foot 6, or this would be 3,050 I believe, or 2,950. So I'll click on that to complete it. [4:23]

Now I'm going to do an interior wall, and so I'll go and use the eyedropper. Now instead of using the eyedropper from the toolbar, I can hold down the Option key. That will bring up the eyedropper; or the Alt key if you're on Windows. And I can pick up the settings of, for example, the interior wall from down below. And having done that, I can go and line up, or start a wall at this corner. And it's facing the wrong way, so I'll change the construction method to the other side and bring it over to where it cleanly intersects the other wall. [4:57]

You can see that on the guideline it's a nice clean angle, a distance of 8 foot 6. And whatever that would be metrically, I'm sure. Now, it's waiting for me to do another wall. You see that I'm in the poly wall mode, if I want to complete its without doing another wall, I can either click on the same point, which would have a distance of zero, or I can right-click and just say OK. And that will say, "No more, this one is OK", or whatever I've done so far is OK. Of course if we click on cancel, then it would just discard that wall. [5:30]

Now these two walls are not cleaning up, so I'll go ahead and select the horizontal wall, the interior wall here, and then I will hold down the Shift key and select the wall that's meeting it perpendicular. And now we see handles on both of them. And I'll use the intersect icon to make this interior wall extend a little bit further. So now it has a nice clean intersection. Let me repeat this on international version. So I'll jump over to that one, and here we are on the ground floor. I'm going to go up to the story above. Now, I'm in the U.S. version of ArchiCAD, in terms of the software, so it says 1, 2, 3. Probably you'll see 0, 1, 2. [6:13]

But I'm on the upper story, and I'm going to call and right-click on the ground floor and say, "Show as Trace Reference" Then I will use the eyedropper. Remember we can hold down the Option key or Alt key to get the eyedropper and click on this wall, the exterior wall. And now I'm going to position my cursor over the exterior wall and slide up and then click on the orange ball, or just slide up, you'll get the orange dashed line. Now I want to find that intersection point, so I'll move along the edge of this wall until I see that intersection point. And if I need to, I can zoom in, but I do see the intersection snap cleanly. [6:49]

And I'll start to draw this down. So this one is 5,100, or 16 feet 7 1/2. Go to the right, 4,350; or 14 feet, take it up, 3,450, or 11 feet 3, take this over until it meets, which is 1,400. So a nice, even number there. Just click or type in that value. And then we can go up to the intersection, the perpendicular

intersection, which is 1,650. Or if you need to, you may have to zoom in a little bit, but make sure you have that perpendicular snap and the angle is zero. Click on that point, and then go back to the starting point here with the hammer icon or the black pencil if you did it in more than one step, and click. [7:45]

And now I'll do the interior wall. I use the eyedropper option, or Alt, and click on interior wall. And then I'll draw a wall going across here, and it looks like I didn't quite succeed, so I'll hit the Esc key. So let me again use the eyedropper and make sure that I pick up that setting. The reason I could tell is if the wall looked a little too thick. But now the wall is thinner, and it is an interior setting. So I'll just change the construction method here, and go until I get the intersection icon and a nice, even value. And I'll click one more time with a distance of zero, and that will finish that wall. [8:22]

And to clean up this intersection, I'll select this horizontal interior wall by clicking on it with the Arrow tool, and then shift click on the vertical exterior wall to select that and use the intersect icon. So now I'm caught up, and I'll go back to the U.S. version. So let's start popping in some doors and windows. Now, I'm going to hide the Trace and Reference by clicking on the Trace and Reference icon here. So that way I'm not distracted, I can see a very simple plan to work with. But actually, before I do that, I'll turn it back on, because I'd like to pick up the settings of the window. [9:02]

I'd like to put in a window similar to this one down below here. So I'll hover over it, make sure that the eyedropper, with the Option or Alt key, that it's indicating that it's looking at or seeing the window, and then click. And you can see how the tool changes to window. At this point, I can turn off the Trace and Reference and put in the first window. Now the first window I'll put in will be midway in this upper right wall here, so I'll want the window with the midway center insertion, and I'd also like to use the Window Palettes Control Box to be able to control the special snaps more easily. You can see the special snaps says half, and that's good, so I'll just click on the tick mark that I see there, and click to indicate the outer direction of the window. [9:56]

Now the window down below is actually going to be the same distance away from the corner as this one, it will be in line with it. Now, although there are ways to get a guideline to come down here, I'll show you another way. I'll just click to place this window anywhere in this lower wall. Then I'll go to the Arrow tool and point at the center of the window and start to move it. And when I point and start to move it, this gesture allows me to drag something very, very quickly. So if nothing is selected and you use the Arrow tool, press down on a point that ArchiCAD recognizes, and start to move while your mouse button is held down, you'll see that it actually starts to drag. [10:44]

And now I can actually position my cursor on top of the center point of this other window, and it will be practically aligned. Another way that you can move things of course is to select them, and after you select them, right click and go to do the Move command. Now I'm just going to cancel that. So when I right click up a little higher, you can see the popup menu. So now when I have the Move submenu, you can see it within the recording area. Now, dragging we just did, so we don't need to drag this again. What I'd like to do is put in another window on the other side of this same wall, but symmetrically opposite. [11:23]

So I'd like to mirror it across the center line of the wall. So if I use the Mirror command, that would just move this window to the other side. But I want to mirror a copy, so that it leaves this window alone, but creates a copy. So I'll use the Mirror copy, and there is a keyboard shortcut here if you want to learn it, it's Option+Command+M, or Alt+CTRL+M I believe. Now I'll click on this. Now it's basically waiting for me to indicate where the mirroring axis is. How do I know that? Because the status bar down at the bottom says, "Enter first point of Mirroring Access". And it tells me we're going to mirror a copy. So what I want to do is find the midpoint of this wall, which is pretty easy because I actually simply go along the wall and find where the checkmark is and click. [12:12]

And you can see the new window showed up. Now if it wasn't locked into the wall, in other words, if it was a chair or a table or a series of elements, then the Mirroring command would require two clicks to define, say from the one point that I clicked on, that the Mirror line was going vertically from there. But when we're doing with a window or a door, it knows that it has to stay in the wall, so you just need one click. [12:38]

Now let's put in the next window a certain distance. It will be going from a distance on the left side bottom, so I'll change it to distance here. And I'll change that to 4 feet 11 inches, or 1,500 mm. And I'll go down to this bottom left area, and then I can see the checkmark. Now, I had changed to the Arrow tool, so I need to go into the Window tool, obviously to place a window. Otherwise, clicking with the Arrow tool I would just be selecting. So I'll just go back, find that same point that I was going to click on, and sometimes with ArchiCAD 15, this red ball gets in the way for clicking. So I'm going to actually zoom in, because the red ball will reposition itself, and also get smaller. So now I can see that tick mark that I was hovering over. [13:31]

So that's one of the things that I find a little bit annoying with the new ArchiCAD 15, the red ball. Because it can get in the way of clicking on other things. But, if you zoom in or out, it will reposition itself along that edge. Now I want to put in the next window at the midway point of the back wall, which is going to a little bathroom up here. And so I'll go along here, and this time I do want to make I'm back that that halfway division, and I'll go along and click on this halfway point. I need to put one more window in the bottom right here, and so this is going to be a distance. But this distance I'm specifying by how far it is from the corner, so I'm going to switch to corner insertion, and I'll tell it that I need it to be 4 inches away. [14:29]

So by typing that in and then hovering over this, you can see the little sort of zipper of multiple snap points. And when I have a checkmark, I can click on that and then gesture up to say that the opening is on the upper side of that point. And then gesture out to say the window is there. Now these two windows are in the bathroom, and they need to be actually a little bit shorter, or actually, still have the same head height, but actually be not quite as tall. So what I'll do is I'll select one of them by using the Arrow tool, and going over the edge or corner of it, and click. And I'll select the other one by shift clicking, just like we did with the walls. [15:12]

When the selection highlight shows up, I can click on it, and now we see we have two windows highlighted. And what I'm going to do is say change the B height coordinate or value from 5 feet to 3

feet. So it will be a shorter window, it will go above the toilet, and fit above the sink nicely as well. If you're doing it in metric, I think that would be 900 mm is what we'd want to be doing. And my cursor, my zoom, just sort of jumped out a little bit. So I'll back up to through a few of these zooms, and find a nice convenient location there. [15:55]

So let me switch now to pop in some doors. So you can see how with the Door tool, I want to make sure that I'm actually putting in the right door. You'll see when I activated the door, it went to "D2 Sliding". So the last door I was working with was a sliding door. So it's very convenient to just use the Virtual Trace, turn that on, and use the eyedropper with the Option or Alt key, and pick up settings, for example, of this interior door down below, which happens to be the type that I want. And then I can go and turn off the Virtual Trace, and we'll put in the door by corner, 8 inches away, which would be 200 mm I believe. [16:38]

And put it in by corner, and I'll hover over this, and you can see the checkmark. I'll click to indicate the opening, and then click to indicate that it swings up. And we have just one more door, and this one is going to be 4 inches, or 100 mm from this corner here. And if I need to, I can zoom in of course to make sure that I'm right on the point that I expect, click, click, click. And we're done with that. And I'll just go back to the previous zoom. So now I'm going to very quickly repeat this with the international version so you get a quick review. [17:16]

And so I'll pick up the settings of the Window tool from down below here, turn off the Virtual Trace, and we'll put the window in midway. And so let's actually bring up the Window Palettes Control Box. And it's on the halfway, so now I can snap and pop this in. Now I am going to put in one just sort of arbitrarily, go to the Arrow tool, press down on the center point of this window and drag it in one gesture, and then line it up with this other one here. And with it still selected, I'll right click and say, "Move". Let's just do this up here, Move, Mirror a Copy; and then find the midpoint here and click on it. [18:05]

And you can see how the copy is symmetrically placed. And I'll go and change this to the inserting by distance, and were going to have this distance here of 1,500 mm, which would be in the American version would be 4 feet 11. And this is still center point inserted. So I'll just go along here. Now again, we're getting that globe in the way. So I'll just zoom in a little bit, we'll still have the same tick mark, but the globe is repositioned. But I do need to have the Window tool active, and so I'll just again, go find that tick mark and click to indicate the window faces out. And roll my mouse wheel to zoom out a little bit. [18:51]

I'll pop in the upper window at the halfway mark, and then I will switch these to corner insertion, and tell it a distance. In this case it's going to be 4 inches or 100 mm in here. And I'll zoom in a little bit so I can see it. And you can see here's the little check marks. Click, click, click. And I actually forgot one window that's on the right side, so let me switch it back. This is going to be at the halfway mark. And this window is actually going to be a little bit wider. So instead of 900 mm, it's going to be 1,800. Or that's going to be 5 feet I believe it is what we're going to do. But the height of it - actually I guess we'll do this 1,500, because that's about 5 feet here. but by 1,200. So 1,500 in width, 1,200 in height. [19:53]

That would be 5 feet by 4 feet. And I'll pop this in at this point. But actually I do want it to be inserted by center, and then another click to confirm that, and a third click to say it faces out. Now this particular window I'm going to make one other change. So I'm going to select the window with the Arrow tool and open up its tool, its window selection settings. And the window selection settings you can see the plan view, and we can jump straight to an angled view. Here it's just a simple single pane, but it's a rather large one. So I'm going to go and change in the basic window settings under sash options. [20:37]

So I'll select that, and I'll pick horizontal, vertical grid. And when I pick that, we will get a number of grid divisions, and we can just choose that. And I'm now going to click OK, which is off the recording screen, but still visible for me on my screen. So I'll click OK. Now let's just take a look in 3D to see what this looks like. And you can see if I zoom in a little bit, you can see the difference between the different window types there that we've got. So let me go back to the floor plan by clicking on this plan icon, and I'll switch back to the American version to put in that last window, which I had forgotten about. [21:22]

So I'll activate the Window tool here, I'll change it from 2 foot 6 to 5 feet in width, and 4 feet in height. Still leaving the head height the same, and I'll go ahead and put it in by center insertion and the halfway mark here. And go along until I find this point, and insert it. And before I put it in, or after I put it in, I can change the glazing pattern. So again, I'll select it, this particular window, and you'll see that when we look at the preview, it's just a very simple one. I'm going to go open up the custom settings and sometimes it may say, "W1 Casement Settings" or things like that. And in that custom settings, we'll have the option of looking at the sash options or sash settings. [22:14]

A little bit different look, but you can see the "No Mullions", and here's "HV Grid" or horizontal and vertical grid, where it's got a certain number of divisions. That looks perfect to me, so I'll just click OK, which is a little off screen, but will confirm that. And we'll take a look in 3D. I'll use F3, which will take me out to the 3D here. And let me just click the zoom or green button here to make it take up the available space. And then I'll use the Fit in Window to zoom a little bit, or I can roll the mouse wheel to look at that. And we can orbit around if we like. [22:56]

Okay, so obviously we do not have any floors yet. Let's take a look - actually, I'll just move this, orbit this, until we can see. And we can see that these walls are stacked right on top of each other. In other words, there's no space for a floor between them to support the upper walls. And there are different ways you can construct things in ArchiCAD. You can draw floors or ceilings inside the standing walls, but we're going to use the simpler method of drawing it out to the outside edge of those walls so that it supports them. In real construction, you might actually have the structural slab only go out to the edge of the framing, and leave the sheathing to be extended directly from the wall. But we're going to take a simpler approach for this particular lesson. [23:55]

So, in order to do that, we do need to lower these first floor or ground floor walls to a different height. So I'm going to go back to the first floor plan, or ground floor plan here, and zoom out a little bit so I can see it and go to the Wall tool. Now there is an option under the Edit menu that's called "Select All". And it has a keyboard shortcut of Command +A or CTRL+A. So you hold down that Command or CTRL key

and type the letter "A", and it will, in this case, select all the walls because I activated the Wall tool. If I actually had another tool like doors and windows active, then it would select all of those. [24:36]

But I want to select all walls, which makes it very simple to make a change to the height for all of them. So you see I've selected them all, and I'm going to change them from 10 feet to 9 feet. And now if I go back to 3D, just to look at it, you'll see that they are now shorter. And when I orbit, there's a space now for the slab underneath that. And the metric version, we would be reducing the height of the walls by 300 mm. So whatever the current height is, you would change it there. Now, I'll put in a floor underneath. So we activate the Slab tool. So the slab tool has different geometry methods, so we can do a polygon or rectangle or a box, or a rotated rectangle. And it has some thickness in height. So right now we're using the default settings for it to be at the zero, which means the reference height of the story, and going down 1 foot, which is a reasonable, or at least a nominal thickness that we can use for today. [25:47]

And in the international version, we have it going from zero down to -300. Now I want to draw this underneath the entire outline, so I'm going to switch to the polygon method. Now some of you may know that you can use the Magic Wand to automatically trace the outline of things, but I've found that in this particular building, because I've intersected some of these corners, and extended walls in certain ways, that it won't find the edges quite so easily. So it's no big deal just to click on these points. We simply need to get a black pencil every time we're at a corner. You'll notice we have a white pencil, and when I go over the corner, it becomes black. [26:31]

If I'm on the edge, I have a striped pencil. And then it changes to a black pencil when I'm at the corner. So I simply click, click on each one of these black pencil marks, and bring it back home for the hammer, and that has created a floor below. Just to take a look in 3D, you can see now there is a floor below these walls. Now let me go back to the floor plan and we'll put in on the second floor. So I'll double click on the second floor or upper story, and I'll zoom in a little bit, and we'll just use the same settings. You notice it automatically has switched to 10 feet and 9 feet, because of the story settings that we've got. So we'll look at story settings a little bit more later, but right now, I'm simply going to accept this and click on these points, because this will work very nicely with the default or standard settings that ArchiCAD provides. [27:28]

Now sometimes, if I was a little bit off, you'll see I get a black pencil when I'm touching the window here. But it's got a white eraser. If I'm at the actual corner of the walls, it will have a black pencil with a black eraser. But even more important, I can see the angle is 90, and the distances, I see the number. Whereas when I was on the other point, the angle was off. So do pay attention to the tracker. That's why I leave the tracker on more often than not, because it will give me feedback to make sure I'm drawing cleanly. So now having done that, I'll go back to 3D and take a look, and we'll see now there's a base for those walls. [28:08]

Now the slabs are standing out as a different color, and maybe that's a design choice that you might make, but if you don't want it to stand out, if you want it to have a consistent color on the outside of the building, then what we can do is select, and I'll just go and select this upper slab by clicking on it with the

Arrow tool, and I'll hold down the Shift key and click on the lower slab. And you can see I've now selected two slabs. Let's see here, I've selected the two slabs and I have handles on both of them. You can see it says, "All Selected" is 2. And I can open up the slab settings by clicking on the icon here. And you'll see that the model settings here - let me just close some of the other things a little bit to make it a little bit shorter. [28:59]

The model settings have a top, an edge, and a bottom material. So I'll go here and change the edge color from what it is right now to "Default Walls Exterior". Now, how did I know to use this particular material? Well, I skipped a step here, I apologize, but I'll just say OK, and we'll take a look. I'll say OK, and you'll see the color now changes as soon as I deselect it, will be a little bit clearer. You can see the color now changes, and it is looking like a continuous surface, even though there is a wall up here. And of course the slab down below. [29:36]

Now when I select the Wall tool, I can look at its settings, and you'll see that in the model area, it has a material on the outside, or the reference line side of Default Walls Exterior. So in fact, if I wasn't sure what it was, I could check it out by selecting any one of the walls and then working with that. So I'll just say Cancel or OK, because I don't really need to make a change. So now we've got the building starting to take some shape. Let's just orbit around this and see how this looks as we rotate around. And you can see that on this side, it actually looks like one continuous face, even though - and I'll turn off the Orbit mode; even though this is a wall, that's a slab up above. And this is another wall. [30:28]

So ArchiCAD is able to clean up the surfaces that are with the same material, and are in line with each other, or form one continuous plane. And so it's very nice about that. You won't generally see lines, as long as you have a clean connection and the same material. So let me go back to the international version, and we'll just repeat the exercise very quickly. I'll turn on the Virtual Trace to be able to see the story below, and use the eyedropper option or Alt. Click on a door to switch to the Door tool, turn off the Virtual Trace to make it a little simpler onscreen. We'll set the distance here to be 200 mm, and put the door in by corner. [31:19]

And I'll just zoom in a little bit and find the checkmark, click to set the opening, click this at the swing. And we'll change this to 100 mm, and go to the corner here, click to set the opening, click to set the swing. You'll need to make sure that you've got this set for the - going from one intersection to another or between intersections as opposed to the whole length. That way will be measuring from this corner as opposed to starting at the end. [31:56]

So if I go to 3D here, and I'll hit F3 to just jump to 3D, and we'll use the Orbit to look at this. We can see the heights now, it looks like I actually might have already adjusted these walls, let's just take a look. I'll activate the Arrow tool and select a wall. And we can see here that the walls are 2,800 mm, and the walls up above are starting at 3,100, so there's a gap. If yours are different, then you may want to go back. And let's just quickly go back to the ground floor. I'll just double click here, go to the Wall tool, select all walls, and you can see that that selects all of them. And then I could change the height if we needed to for all of them in one go. [32:47]

Now if I do change that, it won't affect the thickness unless I change that as well. In other words, it will only change the parameter or the setting that I'm adjusting, perhaps leaving some walls thicker and some thinner. Unless I change the thickness, then all of them will become the new thickness. So let me go in down and create a slab for underneath. So I'll go and activate the Slab tool, tell it to do a polygon shape. It is set to go in from 0 to -300, which is fine. And I'll just click this series of points very, very quickly. Black pencil on each one. And you'll notice this little palette; we hadn't been paying attention to it. It allows us to on the fly, switch to do curved elements and other things. But right now, I just want to stay in the straight mode, so I'll ignore it or just move it out of the way. [33:40]

And snap to these points, and we're done with that. Let me go up to the story above, and you'll notice that the Slab tool is correctly changed to be 3,100 going down to 2,800. So it's going to sit right underneath those walls. And I'll click on each of these points. And now if I go back to 3D, we'll see that they are working. And I guess I had already adjusted on this wall, and this file, the settings for the color. So if I select for example with the Arrow tool the slab, will see that this slab settings - well actually, maybe they're just showing that it's "Paint 01", and that's matching what the walls are. So it's saying that is "Paint 01" here. [34:35]

And let me just collapse this down, so we can see more of the dialog box and click OK. And let's just select this wall, and see what settings it has. Ah, it's "Paint 01" on all sides. So in this case, the color was already matching, and we don't have to make it an adjustment. So that's the difference between international template and the U.S. template; that in this case is working in our favor. So let's go back to the U.S. version and finish up very quickly with creating some sections. So I'm going to go and go back to the first floor plan and just zoom out a little bit. I'll just hit the minus sign twice, double click on that. That takes me out a little bit. And I can just carefully draw with the magnifying glass to zoom in. [35:33]

And let me activate a tool in the Document menu called "Section". Because what I'd like to do is cut a section. But perhaps before we do that, let's take a look at the elevations. There are some elevations that are drawn. In fact, if I zoom out to Fit in Window, we'll see that there are these markers here. I'll close the Control Box so we can see the four markers. These are going to show the building elevations of the building from these four directions. They're a little bit larger than we need, but I'm not going to worry about it. Just go and double click on "East Elevation", and we'll see what we've got. And you can see within a second or two, the elevation is drawn. It looks like somehow that slab moved when I wasn't looking, so let me just go back to the second floor plan and adjust it. [36:21]

I noticed something in the corner of my eye here, yes. For some reason that slab had slipped away. So I must've grabbed it by accident without realizing it. So I'm just going to, without anything selected, with the Arrow tool active, press down on a corner and start to drag in one action, let go of the mouse button, and then position it where I want it to go. So that's the quickest way to drag is just select something when it's not selected, and while the mouse button is held down, start to do the move to gesture. [36:53]

So let me go back now, having placed it in the correct location, to look at the elevation. And ah, that's now looking a lot cleaner. Now you notice these lines off to the side, these are the ones indicating the

story heights, and so they are the top of finished floor that are being indicated right now. Let's look at the north elevation, and of course you can check each one of them in turn and you can see they update very quickly because the building is so small. So now what I'd like to do is actually cut a section through this. So I'll go back to the floor plan and will activate the Section tool. [37:31]

So the Section tool is in the Document group of tools, and you may have to use the little scroll bar if you have a limited screen, but most of you will see all of these about needing a scroll. I'll activate the Section tool, and let me just use the Hand or Pan tool to drag this down and click it into position. So I'd like to be on the first floor to place this first section, so I'll go back to the first floor plan and perhaps zoom out a little bit, double click on the minus here. And I'd like to place it in line with the center of this window. So you'll notice when I place my cursor to the center of the window on the outside, that it has a checkmark. So I'll click on that, and I'll take it straight across. [38:19]

So I'll take it past the building just a little bit, and then I'll point with the eyeball cursor down. So that means it's going to show me the section looking in that direction. Now let's go and look in the clone folder for sections. You'll notice that this folder for sections as a little triangle now, because this first section has appeared or I've created it. I'll double click on that, and we'll see this section come up. And we can see the building start to take shape. You'll notice that there actually, if I zoom in, that it's cleaning up the intersections between the walls and floors, which may be good or may not be, depending upon what you want to achieve. [39:05]

For a schematic section, it's just a very clean look. As you get more sophisticated ArchiCAD, you can create sections that actually are much closer to true construction documents. But for right now, we're seeing quite a bit instantly. So let's go back to the floor plan and put in one more section. And this time, we'll do it as a jogged section. And so in other words, I would like to cut through the two doors here, but then jog over and cut through this window. So in order to do that, I'm going to switch from a straight session to a jogged section, or staggered, and then this time I'll click on this door, go down along the guideline, and then after I click, because it knows it's going to be staggered, it wonders if I go left or right. [39:58]

So I'll take it to the proper direction, and then line it up. You can see the dotted line indicating that this is just a lineup that we're seeing, and that the heavy rubber band line is actually what we're creating. So I click, and then I have the opportunity to set this. And I'll draw this out a little further. And then when I'm done, since it would be prepared a stagger more than one time, I'll just click again. Like the walls, when it says, "Distance zero", to indicate this is as far as I want to go. And then I will click looking this way. [40:30]

Now you'll notice that this section here is actually of course starting from this wall, from the corner of the door, this snap point of the door, but it's not going out as far as where we would see this wall. So it might be a little bit misleading. So let me just go zoom in on this, and let's see. I'd like to select the section by using the Arrow tool, go to either the edge of the section, where we get the Mercedes cursor, or I can go to any of these points that have a little handles. And I can go now to one of these points. And

we'll see, if I press it down, this allows me to move the whole thing. You see the Editing palette has popped up, but I don't really want to move it, so I'll hit the Esc key. [41:15]

I believe we need to go to the end of the line just before the marker. You can see the little checkmark, and when I press down there, you'll notice that the Editing palette now has the option for stretching. So I'll choose that stretch option and drag it up a little further. So now, if I zoom back out a little bit, we can see that it's going to extend. Now these lines off to the side are indicating how far it's going to look, whether the direction it's looking. But it will not print. If you would like to get rid of them because they are distracting, go to the View menu, Onscreen View Options, and turn off what is called "Marker Range". So you can leave them on, it won't print, but if I turn that off, it's a little bit cleaner result. [42:07]

So now that I've got that second section, let me just go and select that here, double click on it, and you can see the other section coming up with a little bit of the corner of the building to the back there. So I'll just repeat this in the international version, and we'll finish up this lesson. So we're looking in 3D here. I'll go back to the floor plan, the first floor plan, and I'll activate the Section tool. And we'll draw the first section from the center of this window past the other window looking down; it has a little different mark. In fact here I'd like to stretch it out so that the marker is in line with the building. I'll select it by using the Arrow tool. Go to the endpoint, press down, and you see the little stretch icon in the Editing palette. [43:03]

And I'll just take it out a little bit there, and I'll draw the other section. I'll activate the Section tool again, and switch to a staggered section. And this time I'll line it up with this door, go down, go over in line with the center of this window perhaps, go down, and then look. Actually, click on that point to finish it, and then say I'd like to look in this direction, and again, I'll select this with the Arrow tool, click on it, and press down on the corner point with the stretch option and move it away. And now if I go and just look in the - if I want to look at these sections, one thing you can do is actually press down on this section to select it, right click, and say, "Open Section", and that will bring up that particular section view. [43:55]

So you don't even have to necessarily go to the View Map, although the View Map will make sure that the correct layers are showing, which might not be the case when you select it on the floor plan. Now I'm noticing that the slabs here have a different appearance. Let's just zoom in on this. And so, here, the slab is showing, but it's looking very faint. It's hard to tell. Now if we switch the view, Onscreen View Options to true line weight, we might be able to see these a little bit more clearly. So that's again under the View, Onscreen View Options, and True Line Weight will show us the weight of these things which may make it a little be easier to tell how it's going to print out. So it's certainly much bolder and stands out more easily to the eye having done that. [44:52]

So, this concludes our lesson on creating an additional story, popping in more windows and doors, and creating floors and sections for the building. This is Eric Bobrow; I hope you enjoyed this lesson. I look forward to getting your feedback. Please add your comments and questions down below on the lesson page. Thanks for watching.