QUICKSTART COURSE - MODULE 5 – PART 1

For more information about the QuickStart Course, visit http://www.acbestpractices.com/quickstart

Hello, this is Eric Bobrow. And in this lesson, we'll be taking a look at placing all of the equipment and furniture into the project. We're looking at the building as it stands at the end of the previous lesson, where we just installed all of the roofs, and I'd like to perhaps make it a little bit simpler to view the floor plan. Right now, we're looking at the ground floor or first floor in the U.S., and we are seeing the upper story as a trace reference. [00:32]

So I'm going to go and click on the Trace and Reference icon here, and turn it off. There's also a shortcut you can see it popped up, Shift+F2. But I'll just click on that, and that simplifies our view. We're now just looking at the ground floor. I'm also going to want to hide the roofs, and I think maybe these section lines are also going to get in the way. So I'll select the roof system by clicking on it with the Arrow tool, and then I'll shift click to select one of the section markers. Now I've got these two items selected, and I'm going to go click in empty space, and when I do that, there's an option or the popup menu comes up. One of the options is "Layers". And I can use the option to "Hide Layer". [1:20]

So what will do is hide the layers that the elements that are selected are on. So I select that command, and you can see now it's much easier to look and work in this view. So, any time you find that useful, you might try that. Select one or more elements, and then right click, go to the Layers. So I'll just gesture that again. Here's the slab that I've just selected, right click, layers, and hide layer. If I did that then the slab would be hidden. Okay, so now I want to go and put in some things in this area, which is going to be the bathroom. And I'll go to the Object tool. And in the Object tool, I'll open up the settings by clicking once on the icon in the info box. [2:10]

And I'll just simplify the view a little bit; close down one of the panels, so that you can see what I'm seeing, rather than having it go off the bottom of the screen of the recorded area. Now, when we're looking for objects, we can navigate through the library. And we're right now the USA library, so it's organized in a certain way. It will be different in the international one. Now you can navigate and try to find where, for example, the plumbing fixtures are. And they are in this plumbing category here. But sometimes it's easier just to go under the popup, change from Folder view to "Find Library Parts". Because you can just very quickly type in for example, "bathtub", then hit the Enter or Return key, which is the same as clicking "Find", and you'll see that anything that the word "bathtub" will come up. [2:58]

So I'd like a simple rectangular bathtub here. You can see the preview in the library part preview area. And I'll switch to the plan representation by clicking on this icon at the top of the preview area. Now, you'll see that the floor plan representation has a number of little X's. As you recall in an earlier lesson, I

can click on it and say I'd like to put it in by this corner. So this hotspot will be used to insert it. I won't worry about the sizing right now, we can set that on the floor plan, but sometimes you'll want to set the sizing before you place it. I do want to set it to the correct layer. Right now it's on the ArchiCAD layer. [3:41]

The ArchiCAD layer is a special layer that will never get turned off. In other words, ArchiCAD, anything that's put onto that layer will always be visible. Now a bathtub, we will probably want to show in all things, but probably not on the Reflected Ceiling plan. So we're going to be selecting a layer that's appropriate for it. So I press down here. On the USA version, this would go perhaps on "A Floor Fixtures", because it is fixed and will be seen in all the cases that other fixtures are shown. In the international version, you might use "MEP Plumbing" to specify that, because they have a whole different layer system there. [4:23]

So I'll click OK, and I'll go to this corner of the bathroom. And when I get a checkmark, I'll click. And let's just see, I'm using the insertion method right now, which is orthogonal basically. It will put it in just straight, whatever we see in the library part. And a single click just placed it at that corner there. Now you can see it's a little bit too big, so I'm going to go with the Arrow tool and select it. So I'll go to one of its corners with the Arrow tool and click on it. And you can see that a number of different handles come up. Now this may be a little bit different depending on which version of ArchiCAD you're in, but usually one of these corners or generally the corners are an area where you can resize an object. [5:12]

So you'll notice that in this corner here, there's a magenta diamond shape. These are special hotspots that can be stretched. Other corner hotspots may be able to be stretched, but anything that the magenta color diamond is going to be stretchable. Now I press down on it with my Arrow tool, with the element already selected, and I get the popup here that has many different choices. This is the pet palette. And I'm going to select the option that says, "Move this node". So this has got a four way symbol, but it's indicating that it's only a single node, as opposed to the other one that has a similar symbol but shows the object or the element as a whole being moved. So I'll use this one, this will only move that one node. [6:01]

And when I'm in that editing mode, then you can see that as I move my mouse around, it's giving me a ghost image showing how this might look if I were to stretch it a certain way. But I'll bring my cursor up to the interior intersection of the walls, and you can see the little checkmark. And when I'm positioned over there, you'll notice that it says the length is 5 feet. So I'm actually adjusting it from what was originally 5 feet 2 and a fraction down to 5 feet. So that it is the way that room was created was to have a standard size for a conventional tub in the United States, 5 feet. So I'll click and specify that. Now in the international version, that would be a different size, but you can simply snap it to the interior face of the wall, and in this tub will fit in. [6:56]

 Obviously, sometimes you'll need to adjust the size of the room to fit a fixture or the elements that you need to place. In this case, the room was set, properly and I just needed to make sure the ArchiCAD object fit into it. Now I'll click outside of the element to deselect it, and go back to the Object tool, where I can go and pick a different element. So I'll open up the Object tool settings again by clicking on

the icon in the info box. And in this case, let's just scroll down in the Library Browser, and you'll see that "Tubs" is the folder that we've got here. In the international version, I think it has a different name and may be grouped a little differently. [7:41]

 I'm going to go to "Toilets 15". In the international version, I believe its "WC", and has some other categories as well, bidets and things like that. Now I'm going to scroll down to find the one that I want, I'll get "WC Low Tank", and I believe this one is also available in the international libraries. So we can all be on the same page with it. Now I'd like to put this facing a different way. Now sometimes it's good to just move this dialogue box around so that you can look and say, "Oh, okay. I need the back end of the toilet to be on the right. So I need to rotate it." [8:21]

And when we rotate it, I can actually just click in the corners here. You notice the little curvy arrow. And I click again, and it's rotating it around. And it'll take it 45° at a time until I get it where I want it. And I can also go the other direction if I go to one of the other corners, see you can go one way or the other. Now here it says 270°, so that's rotating it around 3/4 of the way around a circle, and you can see the little hotspot is selected. So that's where it's going to be placing it or inserting it. And I'll click OK. Now the layer is still the same layer that I was on before, so I don't have to redo that. When you're putting in multiple elements of the same category like plumbing elements or fixtures, then having set the layer properly once, it will just remember that. So I'll say OK. [9:13]

Now, I'm going to position my mouse over the hotspot that I see, the little checkmark in the center point of this window here. Now when I checked the international version, there was not a hotspot in that same place. So in a minute, I'll discuss how you deal with that or how you would get it into the position centered underneath - in the center point of the window and along the interior face of the wall. Now I'm going to go ahead and click and you'll notice that this toilet just went way off to the side. It's nowhere near where it should have been. I noticed this today in ArchiCAD 15. It appears to be a bug. When I restarted ArchiCAD, it seems to get better, but then it happened again. [9:56]

So at this point, I have to just demonstrate with the tools that I've got, and sometimes you're going to find that ArchiCAD doesn't really behave exactly the way you expect it. But usually there's a way to get what you want anyway. So what I'm going to do is go to the Arrow tool, and select and move this. Now I can I press down on the center point and just press down and move, you see that gesture starts a movement. It actually will be interpreted as a drag. So if I don't have it selected, and with the Arrow tool I press down on the part of the object that it recognizes, and hold down the mouse and drag, it will interpret that as the drag command, and that point that I clicked on is the point that I've attached to with the cursor. [10:45]

So I'll go to the checkmark there. Now let me just undo that. If you instead only have a hotspot on the other side, then what you might need to do is to drag it into that position and then, in a separate operation, drag it to the face of the wall. So I'll demonstrate that for the benefit of international users, and also just a general tip that is very useful to know. Now if I've already got it selected, it's possible that it may drag immediately. If not, I can go and make sure that the pet palette is set to the "Drag" command share, as opposed to rotating or stretching. Now I'll just place this on the checkmark that is

on the side of the window, which I know exists in the international version. And the in a separate operation, I will press, and as I start to move, you can see that it still knows that I want to drag it. [11:42]

 Now I'm moving it horizontally, and I'm just following this guideline here. And sometimes what you want to do is to hold down the Shift key. This is a command that dates back to the very beginnings of ArchiCAD. Holding down the Shift key will lock the angle that you're on. So as I move this around, now even when I move my mouse up or down, it's the Shift key will keep it straight. So I can go and perhaps put my cursor on the corner of this wall, and that means that I'm moving horizontally, but I'm lining it up with this corner point. [12:18]

So that's a really a good technique to use it is just simply move something in perhaps more than one step into position. First to one snap point, and then slide along horizontally or vertically, perhaps with the Shift key, to make sure that you can then find an intersection or a lining point. Now this looks okay, it's in the right position. Now maybe it should be pulled away from the wall, that's a really a design consideration if this is installed against the wall or perhaps freestanding. But let's assume that it's against the wall, but that the windowsill should be seen. And you may notice that the windowsill is being hidden by this object. So here we have a graphic issue, not a big one. But what I'm going to do is right click on the object or in empty space with the object still selected, and go to the command called "Display Order". [13:17]

Now Display Order will move graphic elements, like this toilet, forward or backward in the display order. So I'm going to say send it to the back. That will put it behind all the other elements that are drawn in this area. Sometimes, we may just want to send it backward, and then we may take it one or two or three steps backward. But in this case, very quickly, I'll just say, "Send to Back". And although it's still selected, the windowsill is now showing properly, and when I deselect it, you'll see me get a nice clean result. Now I'm rolling the mouse wheel to zoom in or out, and I'm using the center mouse button to pan. So I'm just bringing this up into a convenient location. [14:04]

Now we're going to go and put in the next object. And so I again, go to the object tool, open up the settings. And in this case I'd like to find a sink. Now I'm going to go Find Library Parts, and type in "sink" here. And you'll see that there are a number of different sinks here. Now it actually, in this case, the one that I want is not actually called a sink. I'm going to look for other synonyms. I'll try basin. And you can see here is a basin cabinet. And so sometimes you have to try different words to see what it is that you need, or you can just browse around in the folder structure. But it can be a little tricky sometimes the first time you're looking for a particular element. [14:54]

Now, to avoid that issue of placing something right now with ArchiCAD seeming to offset it - and by the way this happen when I rotated it. It wasn't a problem when it was at the zero. I'm going to put it back to the 0° angle here, and then I'm going to rotate it on the fly. So I'll use a different technique to rotate it as I'm inserting it, which is very powerful and worth knowing for - it's very convenient for many purposes. So, if I'm looking at this from the front here, you can see that when I use the preview that we're looking from the front and this double line here in the back part of the object is actually the

backsplash or upstand. I would like to put it in by this corner. So you can see that this upper right corner in my current view is what I'd like to place in the bottom right corner of these walls. [15:49]

So I indicate that, and then I just leave it at the 0° angle here, and I click OK. Now, if I just clicked, it would place it in the wrong angle, and I could rotate it afterward. But, I'm going to show you a very simple method, which is to switch to "Rotated Insertion for Objects". So by clicking on this icon here that has the little X for the Object, rotated a little bit, with 3Dots indicating that it's going to look at my input to determine that; this will allow me to place it in precisely the way I want, just on the fly. So I'm going to go to this corner and say, "Yeah, I'd like to put this basin cabinet here." And then, as I move my mouse around, after clicking once, you can see the ghost image. [16:38]

And I'll just bring around until I get the result I want. Right now I'm snapping to the guideline. In other words, my pencil is directly below where I started in a straight line on the axis. And I'll click, and you can see that the basin has been put in very nicely. So, we've now completed putting in the bathroom. Let's go and I'll do, I'll just zoom out a little bit here by double clicking on the minus perhaps, and then zoom in with the plus sign with the magnifying glass to the kitchen area. So, to put in the first kitchen cabinet, I'm going to go to the Object tool again. Now, if you're in the international version, you might want to switch from "MEP Plumbing" to "Interior Equipment" as a layer. [17:29]

So these are different layers in the U.S. version. But you might want to use that. Now, why do you want to switch these things? Because the layers control the visibility of the elements, and also give you some options for scheduling them. So in other words, you can have a list of equipment separate from the list of plumbing elements. Now, in the U.S. version Graphisoft supplies, there is not actually a plumbing layer that would work for this. There's one called "P Anno" for annotation. But right now, just to keep it simple, I'll leave it on the Floor Fixture, just for the plumbing and for the next thing I'm going to be drawing. [18:12]

Now, I want to go get cabinet. In this case is going to be a base cabinet here. And not a basin cabinet, but let's say a "Cabinet Base 2D 15". And I believe that the same object would be found in the international version. Now, this has a standard size that it's going to be inserted at which is 4 feet by 2 feet. In the international version will be some metric sizing of course. And I'm not sure that's the right size, but I'll place this and change the size afterwards, much like I did the bathtub. Now, I'm going to be first putting in one that does not have a sink. And you'll notice that his cabinet shows a sink. It may not be obvious from first glance, but this can be configured to not have a sink. So I go to the panel that says "Kitchen Cabinet Settings". [19:08]

So in Objects here, we have an upper area for preview and positioning, which allows you to change the overall size, and look at this in different floor plan and elevation and angled views. And then we'll always have Parameters, which will give us fine tuning control of every little part of the objects that Graphisoft provides. And then we may, and in most cases in recent libraries, have a separate panel for controlling settings. It gives us a little bit more graphic explanation of what each parameter does while we're adjusting it. So, I would like to go from the cabinet here to the counter, where is says, "What type of sink do you want?" And when I press down, you can see that there's a group of different sinks. [19:54]

It actually goes down below the recorded length of the screen resolution for recording to have several more different sink types. But I'm going to pick "No sink". So in other words, I'm going to say I don't want a sink. And lo and behold, there the object as changed. And the cabinet does not have a sink; it just got a flat countertop. Now again, I'll put it back to the floor plan representation, and remember we were looking from the front. And you'll notice these extra little hotspots here, those relate to the overhang of the cabinet in this case. In other words, the countertop sticks out beyond the front doors of the cabinet I believe. [20:35]

Now, I'm going to use this upper left insertion point, which I think was the default, and I'll click the OK button, which is a little bit below what you can see on screen. And then I'll go ahead and click in his corner, and rotate it around until it looks correct. In this case, I can use my pencil on the edge of the wall, and it'll be nice and straight. You can see the angle says 90°. So that's putting in a single cabinet. Notice there's no end line here. This allows us to put in other cabinets, and have them not show a line between them until you've reached the end of the row. I'll put in one more here. So I'll click at the end point of this cabinet and rotate it down. [21:18]

Now having put in these two, its clear there's no space down below for anything substantial, and we do want to have a refrigerator there. So what I'll do is go back to the Arrow tool and select this upper one, and I'll change its size. Now, I could change its size by grabbing this magenta hotspot, and make sure that I'm in the pet palette mode to edit that size. And you can see how I could move this around. It's telling me that as I move it, the cabinet width is a certain size and the cabinet depth is a certain size. And I can just type in for example three feet, or it would be 900 mm in the metric version that I'm going to try out. [22:04]

So you see that that shortened that cabinet appropriately. Now, I'm going to go and move the other cabinet to it, but before I do that, I'll actually pick up the settings. I'll use the eyedropper. So I'll go to the eyedropper here, and I'll pick up the settings of this one by clicking on it, and then I'll go to the Syringe tool right next to the eyedropper in the toolbar, and click on the other one. And you see how it got shorter. So it's now the same size. So this is one way that you can make a change to one and afterwards transfer it to another. So now, with the Arrow tool, I'll go and grab. I'll press down and start to move in a single action this object. [22:52]

And you can see that when I press and start to move, it allows me to just drag it. And I've now positioned it correctly. Now this particular cabinet, I would like to have an end line on it. So let's look at how that's set. With it selected, I'll click on the Object Settings icon in the info bar, and you can see that the counter, which was the last thing I was looking at, has a number of controls. But that's not where I would control the visibility. I need to go to the appearance here. And the only way to know this is to play around the objects and look at all of the options. And you can flip through this by using the forward and back buttons with these little triangles. [23:36]

And what I've found is that under the appearance that the edge visibility is available, and I can go and select it here. In earlier versions of ArchiCAD, it used to say left, right, both, or none. But here we have a visual choice which makes it a little bit nicer. So you can see that when I select it here, it's changed it in

the plan preview. Now, if I go to the 3D preview, you'll notice that it's a little subtle, but there are no end lines in the 3D preview. Some elements, like this cabinet or many of the base cabinets, will also have a control under the main cabinet settings for a 3D counter edge. And the same command of left, right, both, or none would be available. And you see when I select that, it changes in 3D. Frankly, I don't quite understand what you would want to have one in the plan and one in 3D, but we'll just leave it that that sometimes you have to change these things independently of each other. [24:42]

So I'll just say OK, and you can see that on the plan it now looks the way I would want it. Now by the way, I click to deselect that element, and instead, because the Arrow tool was active, and there's a slab there, it's selected the floor slab. Now if I don't want anything selected, I can just hit the Esc key. So I'll do that. But perhaps I actually don't even want the slab to be around; it just may be getting in the way right now. So I'll click to select the slab and remember is that if I right click, one of the options under "Layers" it is to hide that layer. So that will actually get it out of the way so to speak. So now I want to put in a refrigerator, so I'll go into the Object tool, and click on the Object settings icon. And I'll search for "refrigerator". So I'll say Find Library Parts, and I'll type in our "refrig", and then hit Enter, and see. So you don't have to type the whole name, just as long as it's enough to reduce the number of parts found to a reasonable number. So here we have refrigerator side by side, and we can go ahead and choose this. [25:57]

The library part window for some reason jumped down below the screen. I just stretched it using the little stretch handle in the bottom right. If you're on windows it can actually stretch this by any edge on the Mac, you can only resize it but the bottom right corner. Now, I want to put this in. Again, I'll just put it back to zero, because I don't want to have that offset issue. But I do want to pick which side I'm putting in by. So in other words, if this is the front, and I can confirm that by looking in the preview, which will always be a view from the bottom right, then I would actually like to put it in by the upper right corner and rotate it into position. So I'll just say OK, and again, I've still got the rotation icon selected for inserting the object. And I'll click on this corner here, and rotate this around, but make sure that I'm going straight. [26:58]

I may need to actually scroll down so that I have enough space to get on the guideline cleanly. I'll click here. And you can see that that neatly fits into position. Now of course in real design, perhaps there needs to be a little bit more clearance, so we might need to adjust the sizing. But for our schematic design, this is more than good enough because these elements are precisely touching each other. So, now we'll go back to do more cabinets. And I'm going to use the eyedropper and I'll use the shortcut. Hold down the Option key on Mac or the Alt key on Windows and pick up the settings of this cabinet. So that will again make me ready to put in a cabinet like this one. Now I'll go in and just double check which corner point it is. And given my bug that I have right now, I'll just put it back to the 0°, so it's horizontal. [27:52]

And this is fine. This upper left corner will be the back corner of that I'm going to be inserting. And let me just close up these parameters here, and I'll just click OK. So now I'll just insert this around, and line up along the face of the wall, and that's the next cabinet here. Now the next cabinet, I'll put right next to it, and I'll click at this corner and rotate it around. But this cabinet, I would like to have a sink. So I'm

going to switch to the Arrow tool, select the Object that I just placed. And I could've done this before I place it, but I'm doing it after, it's not a problem. So I've got it selected, it now - you can see in the upper right of the Object settings it says, "Selected: 1 / Editable: 1". So in other words, I have permission to edit this. [28:45]

And again I'll go to the counter. Actually, that's where I am, and change it from no sink to let's say a double sink here. And I'll click the OK button which is off-screen from what you are seeing on the recording. And that actually is placed the sink properly. I forgot to do the end line, so I'll go in and quickly find that. So this is under the main cabinet, we have the control for setting the edge. Now this is in 3D, and then if I go to the appearance, and have a similar control for edge visibility, this is on the plan. So that has now got a line in the right place. So we'll be putting now a stove or a range. So again I'll go back to the Object tool and open it up. And here I am going to go and look for a stove. And here is gas stove. Now I believe in the international version, you have to search for range because it's called gas range. So sometimes you just need to type in what you think, and then try something else. [29:51]

Perhaps if you typed in "Gas" you might find that as well, or just search around. So I'll say OK. Now, I actually have to click on it to say I'd like to select this one. See you can see it's got a certain size and appearance here. And some letters actually are G in this case showing, as well as the symbol. Now, let me look at the parameters here. You'll notice that there are no custom settings like we were looking at for the cabinet that said "cabinet settings" or something. So we have to look in parameters if we want to make any changes other than the basic size. And one of the things you'll see here is that the cook top type has a choice. So type two, or I can put type three, and you can see that has made a change. [30:44]

If we look in 3D, we'll also see the change reflected there. So sometimes you need to go into these parameters to adjust some things. Wherever it exists, you might want to go into the custom settings there. Because they're a little bit more visible. You might have a picture of what each top is. So I'll just say that I'd like to insert it by the upper right corner, which would be the back right corner here. And say OK. And I'll pop it in and rotate this around. And again, I'll just scroll up a little bit so that I can make sure that I'm on the axis line there. And then I'll scroll back down. So now we have a little extra space. [31:29]

We might want to just stretch the cabinet, or we could say, "Well, the stove, actually a range, could be bigger." So I'll do both. I'm going to grab it by the corner here, and with the pet palette set to moving just that node, I'll move it along the edge of the wall. And I'll type, in this case, 2 foot 6. In the metric version, you might do 800 mm. I'll select this cabinet, and I'll stretch this corner here. And I'll just stretch it over to the end. Again, the pet palette is still showing the same icon. You can see the "Move just a single node" icon. And I'll just snap it into position. It is now 3 foot 6, and that would be 1000 mm in width. [32:21]

So we now have the base configuration here, and again we could allow some clearance, but for now I'm just going to line these up evenly with each other. Now for some reason, it looks like this cabinet we don't have an end line here, and its obscuring the wall. So we could go into the cabinet settings and

again, look at the kitchen cabinet. And under the counter here, appearance, change it and say that we'd like to have the edge visibility. And try one, usually you can get it right the first time, but if you don't, you can always go back in and switch the other one. Because sometimes when it's rotated around, it's sort of a mind twister in terms of which side to do. So we've now got those base elements looking the way that I think they should. [33:20]

And we're going to do some upper wall cabinets here. And so I'll go back to the Object tool, and actually go and use the eyedropper. The shortcut is Option or Alt, and click on the corner of this cabinet. And that will just, when I go into the Object tool, I'll already have it setup for the cabinet. I would like to get a different type of cabinet, so I'm going scroll down until I get one that is a wall cabinet. So "Cabinet Wall 2D 15". And I'll just click the OK button, which is off-screen at this minute. But I'm going to put it back to the 0° angle to avoid that bug that we've been having. And the insertion point is perfect, that's going to be the back left corner, looking straight at it. And when I click on this corner here, I can rotate that into position. [34:11]

So you can see how it placed this cabinet here. I would like to shorten it, because it's going over the window. So I'll select it, go to the magenta hotspot, the editable hotspot, and move that node. And I can move it back just exactly to where the window edge is, or I can look it that number and say, "Oh, its 3 feet 2 and 3/4. Let me just make it a nice even basic 3 foot cabinet". So I just hit 3, and it now is good. And I'm just going to put end lines on this cabinet. Perhaps in the appearance one, we'll put end things on both sides, since it will look better that way. In the wall cabinets, I've noticed that, at least in the library that I'm using, that it does not have a control in the cabinet one for the ends. [35:06]

So some of these library parts were created in different ways, and sometimes you just have to look around and experiment until you get what you need. So I'll click OK, and you can see the lines there. Now I want to put one more cabinet above the stove, so I'm going to actually mirror this across the center line, because I remember that this window was put in centered in the wall. So I'll right click either on the cabinet or in empty space, and choose the Move command. And okay, this is a little bit off screen, so I'll try it again. I'll right click in empty space to get the same thing: Move, Mirror a Copy. So we'll select Mirror a Copy. [35:49]

Now Mirror a Copy we've used a couple of times before. In this case, I'm going to go to the checkmark that indicates I'm at the center of the window. And then move my mouse around, and you can see the little ghost image changing. And when I position my mouse over the horizontal guideline, we get a nice clean result. And this cabinet is now floating above. Now let's take a look at this kitchen, and see what it looks like a 3D. Now we've been looking mostly from the outside of the building, we've been taking views of the building, and seeing the walls and the roofs, etc. But I'd like to see actually just this interior. Now I could set a perspective, you recall in an earlier lesson we placed a camera. But in this case, it's a small room, and it would be a little hard to get it overview of it, because whichever way we look, we'll only see part of it. [36:40]

So instead, I'm going to use an option with the Marquee tool. And with the Marquee tool, you're able to create shapes. You can create an irregular shape, or a rectangle, or a rotated rectangle. I'll leave it in

the rectangular mode, but I'm going to draw a box. And look carefully as I draw this box on the outside corner of the building. But then I stop it just a little bit inside this inner wall. And so I'm enclosing the entire kitchen, except for this area which has the entry door, the door from the living room into the kitchen. Now, I'm going to right click and say that I'd like to Show the Selection or Marquee in 3D. So this is going to show just what I've got selected here. And you can see how we're now seeing three walls, but not the fourth one, because I didn't include it. [37:37]

And I'll use the Orbit tool to rotate around, and voilà. We have a nice looking kitchen. Now you may wonder how these wall cabinets knew to be up in the air. In other words, we basically put all of these objects in the same way; we simply just placed them on the floor plan. And if we actually select and object like this cabinet, we'll see that it's going from 0 to 3 feet and whatever that would be in the metric equivalent, from zero to something. And when I select this wall cabinet, is says it's going from 5 feet to 7 feet 6. Well how does it know to be at that height? Well let me open up the Settings Dialog and see if there's any clue. [38:26]

Now, sometimes you'll need to, in order to get something up in the air, you'll need to change the base height. That's what this little icon here represents. And it says "Relative Base Height" from either the current story or the home story or the project zero. And so we could, in many cases, type in a value there, and it would float up or down. But in this case under parameters, sort of a not very obvious place, is says that the placement height is 5 feet off the ground. And I'm not sure what it is in metric, I think its 1500 mm. [39:01]

So that's what determining it. And if I change that for example to 4 feet 6, which is perhaps a height that I would prefer, it seems to be more standard in some cases. I'll hit the Enter or Return key, and you can see how it moves down. And in fact, you can see that lines it up nicely with the top of the window. And I'll go into this one, and do the same thing and just change that to 4 feet 6. So you could change that I believe from 1,500 mm to 1,200 mm and get a similar effect. Now we do have a little issue with the window, and I'll just select it. You can see that it goes down below the countertop. So what I can do is change the height. [39:46]

Now, the height of the window will then change the window geometry. But where will it be? Well it turns out that I had set this, the header, to story one. Meaning that, the head, or top of the window, is set at a certain height. Right now it's sort of an odd height, 6 feet 11 and a fraction. I'm going to change that to a nice even seven feet here. But regardless, and it just slid up just the tiniest bit. But regardless, when I change the parameters here for the height from 5 feet down to let's say 3 feet; it's going to raise the bottom of the window. Maybe it should be 4 feet, let's try that. So I can type in values and see what that will do. Ah, that looks like it could work. Or maybe it has to be 3 feet 10 or something like that, or 3 feet 8. Whoops. Let me just type in 3 feet 6, something like that. [40:46]

Because maybe there might be a backsplash or an upstand that it has to go above. So you can keep playing with and adjust that at any time during the design process. Now I'll click outside to deselect, and you can see the end result. So having this marquee cut away is a great option. We can zoom out to Fit in Window here; we can orbit around and look at different sizes of this. And we can edit the model right

here in this view, and whatever we do will be seen on the floor plan or in interior elevations as a consequence. So now I'm going to go back to the floor plan, and click on the floor plan icon, or hit F2. [41:30]

 And let me go and do one last thing before we finish this lesson, and that is to put another bathroom up on the upper story. So I'll go and say Fit in Window here, which zooms it out to where we can see the elevation markers. Let me just go and zoom in a little bit again. So I'll use the Arrow tool and I'm going to select the bathtub, and Shift+click to select the toilet, and Shift+click to select the basin cabinet. I'll go to the corner point for each, or if the quick select icon is turned on in the Arrow tool, this little magnet, then we can click anywhere in the middle of it. Now I've selected these three elements, and I'm going to go to the Edit menu and say, Copy. So having copied them, just like anywhere in computer programs, we can paste it. And when we paste it, it doesn't have to be in the same place, it could be in a different place. So what I'm going to do is go up to the upper story. [42:37]

 Now, I'm on the first floor plan, so I can go up to the second floor plan. So I'll just double click on that. And you can see now I'm in the second floor. Now when I did that, it remembered all the original layers. So we've got actually the roofs and the sections turned on. Again, I'll just select the roof and section marker, and right click, and say "Layers, Hide Layer", just to make it a little bit easier to look at. And I have a marquee drawn, and I can tell ArchiCAD that I don't want to see that marquee by hitting the Esc key once or a couple of times and the Marquee will disappear as well. [43:22]

So now I'm up on the upper story, and I'm going to go to the Edit menu and paste. And when I paste, it pasted in exactly in the same location, but I want to put it into this upper area here. Now, if these were perfectly aligned in the same orientation, I might actually be tempted to drag them right into the room. But in fact, I'll just move a little closer by clicking anywhere in the marquee and clicking again where I'd like to drop them. And to finish the pace, I need to click outside them. Now if you forget what ArchiCAD is waiting for you to do, look in the status. It says "Click in marquee to drag, click outside to drop". [44:03]

 So I'll just click outside the marquee, and they'll be dropped into place. Now have a dropped them into place, I'd like to put them in the bathroom, and they all need to be rotated to have a different orientation. Maybe I can do that all at once. So here's what I do. I have the Arrow tool active. I'm not about to click on any real element, because there's nothing out here to select, so I can click in empty space, and a draw a selection arrow marquee. And when I click again, it will select all of those elements. I could also click and Shift+click and Shift+click, and that would be another way to select all of them. So having done that, I'll go to the Edit menu, Move, and Rotate. [44:48]

Or, I could've right clicked and got the "Move" menu and chosen rotate. Now with Rotate, basically we have the option of setting the rotation center point. You can see in the status bar down below it says, "What point is going to stay constant?" Are we going to rotate around? And I'll just say maybe the center of this toilet or WC. And then it says, "Enter rotation arc start point". I'll go down to the bottom corner of this, of the cabinet; or I can even just go along the guideline that's going in this case vertically

onscreen and click. Because all this is setting is the angle that it's going to start at. So I click to start it there, and you notice as I move my mouse around, I get the ghost image. [45:37]

And I can easily rotate it around to where it's 90°, rotated from where it started. So I click on that point, these elements are now rotated in the orientation that I want. So I'll right click here, and say that I'd like to Move, Drag. And I'll go and click on the upper left corner of this bathtub, and click again in the upper left corner of the bathroom to place it. So it's now almost there. Let me just zoom in. I'll use the magnifying plus to carefully zoom in around this. And you can see that the bathtub looks pretty good. It looks like we have an extra tiny fraction of an inch here. So I could stretch that, or probably just leave it alone. We probably wouldn't even see it in the printout. But I do want to move the toilet underneath the center of the window, and of course the basin is way of the way. [46:37]

So let me just click outside to deselect, or hit the Esc key. And I'll just select the toilet and grab its center point, press down, and as long as I've got the pet palette to move, I'll just move it sideways until it gets the checkmark that I'm at the center of this window. Or if there is no checkmark there, then I'll move it and press the Shift key, and then move my mouse up or down until I find an alignment point for example on the other side of the window, any convenient alignment point. And I'll hit the Esc key to deselect. And this basin, I'll just press down and start to move in a single action, and that will start the drag and find the little checkmark. [47:21]

So now that basin is right against the wall, and it's just covering up the window sill, so I'll right click on it and use the option under Display Order to send it to back. We didn't have that issue in the other one because it wasn't next to the window. So now we've got this completed and you see how quickly we could get in those elements by copying a related group and just pasting it in. So remember that if you've already got something drawn somewhere and you can reuse it, perhaps you want to select it, copy it and paste it again in the new general vicinity of the location, and then adjust it as needed. [48:03]

So this completes our lesson on placing all of the fixtures and plumbing equipment. Now there's a bunch of furniture that is in the project. And I'll go down to the ground floor plan here, and let me just go to a previous view. So in this living room, there's a bunch of furniture. And in the sleeping or bedroom, there's different furniture. And I'm going to be posting a PDF with a floor plan with furniture elements, and an indication with labels of what each of those elements is called that you can use to find them easily in the library. So what I'd suggest is as an exercise, you go and put in some of that furniture and see what it looks like. [48:56]

Now when you put in the furniture, you'll want to use a different layer. So under the Object tool here, whoops, let's just cancel that. Under the Object tool here, we might want to use the one that's called "A Furn" for furniture in the U.S. version. I'm not quite sure which one it is in the international, but you can experiment. Now you'll notice that "A Furn" here is hidden. Because on a first floor plan on the construction document, we're not going to want to see furniture when we print out a construction document. But of course for presentation document, it would be showing. [49:34]

So we'll be discussing setting up views and layers for presentation as well as construction documents in an upcoming lesson, but for right now, when you want to put in the furniture, perhaps you want to put

the furniture on that layer, and turn that layer on. Now if I activate this layer and I just click, we'll get a message that says that I'm about to put in something. In this case, it's the wall cabinet. And this layer is hidden. Do I want to choose another layer? Or do I want to show the layer? So if I say, "Show the Layer", then instantly, it turns that layer on. It's actually very nice convenience here. [50:14]

The other way to turn a layer on is to go in to the Layer Dialog box. So we can go under the Document menu, Layers, Layer Settings. Or just simply hit Command+L or CTRL+L, and then in that dialog box that comes up, you can just click the eyeball to turn on a particular layer or turn off a layer as well. So my suggestion for homework on this would be to go ahead and use the PDF as a guide, and put in a bunch of furniture, take some views with the Marquee tool, where you can take a cutaway of just a room or half the building and look at it. Or you could experiment with doing things in perspective, which we had covered in an earlier lesson. So this concludes our lesson on placing fixtures and plumbing elements and a little bit of a homework assignment on putting in the furniture for this building. So this is Eric Bobrow, I appreciate you taking the time to watch. I look forward to getting your feedback on the lesson; please add your comments and questions down below on the lesson page. Thanks for watching.