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QUICKSTART COURSE - MODULE 6 – PART 1

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Hello, this is Eric Bobrow. In this lesson, we'll look at how to create detail drawings and worksheets in ArchiCAD. Here we have the project at the end of the previous lesson, and I would like to open up a section to call out a detail on the edge of the roof. So I will scroll down in the View Map to the Sections folder, and we'll take a look at section number two here. [00:27]

So section number two comes up, and I would like to create a view of this corner of the roof as a detail. But before I do that, I just noticed something that needs to be corrected. If you'll see down here, and I'll zoom in a little bit, we have the furniture showing. And the furniture, as I select it, you'll see it's an object on the layer A-FURN. So what that means is that when I'm using the section view, and it's using the layer combination, you can see down here in the properties that's called Sections, that that's including the furniture. So I'm going to go and customize that, tweak that a little bit by going to the Document menu, Layers, Layer Settings; or by simply hitting Command+L or CTRL+L. [1:18]

In the Layer Dialog box where it says Sections here, I'm going to make a change on the right side. I'm going to go and turn off the Furniture layer. I'll click on the eyeball to hide it. And then I'll click on the Update button. That means whenever this sections layer combination is activated, that the furniture will be turned off. And we'll of course still have the fixtures and equipment, but the furniture will disappear. So you can see that the section updates automatically because the section view here is using that layer combination. So this is something that you can update at any time as you need to, and it's good to know that when you update layer combination, it will affect views that refer to that layer combination. [2:01]

Now let me zoom out to Fit in Window here by clicking on the icon in the navigation area, and let's look at creating a detail for the first time in this course. So I will look in the document section of the toolbox, and find the Detail tool, which sits at the bottom here. When I activate the Detail tool, we'll see the default settings reflected. One of the things will be that it's being placed or will be placed on a layer called A-MARK DETAIL. Now that would be different in the international version, but there'll be a layer set up for detail markers so that they can be turned on or off at different times. I'll leave that alone. Now we have the geometry methods. And we won't really look at all of these. We'll just use the rectangular one. But you can create a call out that may be an irregular shape or perhaps a rotated rectangle in some cases. [2:58]

Now, the most important thing is that the detail has a name. Right now it says just plain "Detail", so I'm going to create an eve detail. So I will name it before I create it. That's generally a good idea, you can

change the name later. Now if you want to create a new detail, you'll want to use this option here, "Create New Detail Viewpoint", as opposed to placing a marker that would be linked to a detail already created. Or possibly creating a marker that's not linked, where you're going to be linking it later after you've got the detail brought into your project. This might be useful if you have some standard details you might want to link a callout to point at. Now the marker is going to be referring to the drawing that is made of that viewpoint. So in other words, I'm going to draw a callout, and then it's going to refer to the drawing on the sheet. It's going to show the drawing number and the sheet number. [3:54]

So I'll go and just click to start creating this, and go on a diagonal, and click on the other corner of what I'd like to include. And then you see the hammer icon, I'll click to say this is where I'd like to place the callout, the actual marker that gives the information about it. So you can see the rounded rectangle. It encloses the area that I just created the rectangular boundary. And then the corner, I'll zoom in on this. I'll click on where that corner of the leader line would be. Now you see in the upper area of the circle is says "#DRGID" so that's the drawing ID will be filled in later after I've placed this on a sheet. And down below we have the name Eve Detail, which is of course what I titled this. And another field reference, the "#LayID" or layout ID number. So what this will do is it will have the drawing number on top, it will fill in the layout number down below, and temporarily it's showing me that this is going to be called the eve detail. [5:03]

Later I'm going to actually turn that off so that all we see are the drawing number and the layout number. Now to show this detail, I'll just position myself on one of the points. For example, the corner here that is where the line changes, and right-click. When I right click on any element that ArchiCAD recognizes it will select it and then it will give me a context menu. In this case, I'd like to open the detail drawing. Now when I open the detail drawing, we'll see something very similar to what we were looking that, although it's been clicked out, we're not seeing any of the context. Now the scale right now has jumped up from 1/4 inch to a foot to 1/2 inch to a foot. If we were in metric, it would be switching from 1 to 50 to say 1 to 25. [5:48]

Now perhaps in this case I actually want to switch it from the half inch scale or 1:24 here and I'll take it a little bit bigger. Let me make this 3/4 inch to a foot, just a little big bigger. And so you can see it zooms up a little bit on the screen. So at this point, we now have the beginnings of a detail drawing. I'm going to go in and put in some annotations. So I'll go to the Label tool. And the Label tool, before I click on it, I'll point out that the layer that it was set at, the most recent layer that I was using was for annotation for the Ceiling plan. And that layer is hidden. Now if I'm smart, I would change this before I put it in, but if I don't pay attention to that, as soon as I click it will warn me that that layer is hidden, asking me if I temporarily want to turn on that layer, or if I would like to choose a layer. So go ahead and say, Choose a Layer, because I would like it to be on a different layer than the Ceiling one. [6:49]

And I'll press down on the little popup for the layer choice, and I'll switch it to the ArchiCAD layer. So this is a layer that is special. It will never get turned off. The main reason to put things on layers in general is to be able to turn them on or off at different times. Since a detail drawing is typically placed onto a sheet, most commonly just a single version of it, we can just put all of the annotation onto the ArchiCAD layer, and then all of those notes and dimensions or whatever will always show. So in general

for detail drawings, I might put all of my annotation. That would be labels and dimensions and text onto the ArchiCAD layer. Now as soon as I've confirmed the layer choice that I want, it then continues the placement of the label. And I'll just click twice at the end of leader line to say I'd like to put in some text. [7:40]

And I'll just be very obvious here. I'll just say "Roof". You would choose something more descriptive perhaps. Now I'll go ahead and put in another label here for the wall, and again I'll be very obvious here and just call it "Exterior Wall", and then click outside that to finish it up. So we now have two notes, and let's take a look at editing some of the line work, creating some of the detail that's going to be on here. So one thing that can get in the way when we're editing are the fills. So if I use the Arrow tool and point in this area, you'll see that there's a fill. And if I point in the area above, there's another fill that will be selected. These sometimes are good, because the fills will include whatever the wall type is, but since I'm actually doing a very schematic level design model right now, all of these are just white fills. So they're not very useful. [8:49]

So what I'll do is I'll go to the Fill tool. I'll switch from the Arrow tool to the Fill tool, go to the Edit menu and say Select All Fills. That will select, right now there are five of them, I'll hit the Delete key or Backspace key on the keyboard. They've now been removed from the view. So it will make it a little bit easier to select things. So that's a good trick for beginning work with details. There are different approaches you can use, but this one certainly is a quick method for just simplifying the things that you won't need, just getting them out of the way. And I'll just take this line and I'll delete it. Now deleting that line does not actually affect the element that it was pointing at, because right now we're looking at a drawing, not a model. [9:37]

I'll take this line here and perhaps I'll just stretch it up. So we can delete things, we can also stretch. And so I'm using the pet palette to stretch, I'm going along the guideline. And you can see that there's a tiny little icon indicating that I'm at the intersection point. And when I click, that line has been extended. Now I'm not going to pretend to do a real detail here, but I will just do a little bit more work with putting in perhaps some of the framing. So if I take this line here and I drag, so I press down and start to move, and take it along the guideline so that it's going vertically, perhaps I want to make a copy. So one option for making a copy is when you're dragging or rotating an element, is to press and release the Option key on the Mac, or the CTRL key on Windows. And you'll see a little tiny + show up. That indicates that I'm creating a copy instead of just dragging the original element. [10:35]

Now I'll type in the distance a 1 1/2 inch, here that would be 6cm. And you can see it's made a copy. And I can do this again. I can drag this down and while I'm dragging or before I conclude the operation, I'll press and release the Option or CTRL key, and then that will mean that there's a +, that there's a copy, and again I'll type in 1 1/2 inch. So, that's just one way to do this. And now I'll go to the Line tool. I'll deselect this by clicking outside it and switch to the Line tool. And I'll create the little cross lines that would indicate that this is some cut lumber and I'll click. Now when I click, again, the Line tool is set at a layer that was turned off, the "No Plot" layer. This is just one of the layers that are available for use in the standard U.S. template. There would be something similar in the international template. I'm going to

again switch the layer by saying "Choose Layer", and I'll pick the ArchiCAD layer. Because I want to draw lines that will just always be visible. And I'll say OK. [11:42]

And I'll draw a diagonal and click on the other corner, and again do the reverse here. And now if I want to drag a copy of these, so I can simplify my work, I can switch to the Arrow tool, select one, and then Shift+click to select the other. And then I'll just drag down. Now when I'm dragging this, I can use the pet palette to say I want to drag the whole thing rather than the other option which is to change the end of the line. And now I'm moving the whole thing. You can see the ghost image. Press and release the Option or CTRL key to get that little plus sign, and in this case to snap it into its new position. So that's a great shortcut for making and dragging a copy. [12:29]

So I've now done some of the basics of what you would do in a detail drawing, adding in some annotation, creating some new line work, deleting some extraneous line work and fills, and editing, in this case this line, to extend it up. So while this is not a real detail drawing, it certainly is showing you all of the methods that you would use in creating a detail drawing. Now I'd like to create a view for this detail, so let me just go and use the button here that says "Save Current View". And you'll see that it brings up the "Save View" dialog. It already has the name Eve Detail in it, and it already has the scale and the layer combination, all of these things. I can just go ahead and say Create. [13:18]

And this will show up, depending on which version of ArchiCAD, right near where your last view was selected. In other words, I was on the second section 2. It showed up there. In some versions of ArchiCAD it may show up at the bottom of the list or at the top of the list. Now, when I double click on this view, I see exactly what I'm looking at here. Of course I can double click on the section, and see just where I called out the view, and I can go back and forth to work on it. Now you'll notice that just immediately below this section folder - and I'll just close it up - you can see this folder of the two sections. There's a folder called Details. And this is a special type of folder. You'll notice that it has a little symbol on it as opposed to the folder lower down that is called Schedules. [14:11]

So that Schedules is just a plain folder, it's an organizing tool just too group things manually. But, when you have a special symbol on it like this, that's called a clone folder. Now a clone folder will automatically get views created whenever you create a project entry of that type. So for example, we created a detail drawing, it showed up. I'll just switch to the Project Map it was added to the Project Map here, simply by creating the marker. And it automatically showed up in the clone folder for details here. So in fact, we didn't have to create a view for it, we could simply rely on the clone folder to create it, which is a very nice convenience. [14:57]

However, there is one thing about this view that needs to be adjusted. You'll see that its scale says 1 1/2 inches equals a foot. So it's a different scale. If I double click on this, you'll see the text all of the sudden changes size. Why? Because the building elements at this scale, 1 1/2 inches to a foot, and I'm pointing at it in the bottom left corner, would be bigger, and the text would be a certain standard size on paper. So depending upon what I want, and here's the other view that I created, perhaps if I do want it to be at the 3/4 inch, then what I do is with this view selected in the clone folder, I would go to the settings.

Perhaps clicking on this button here that says View Settings, and then I'd switch it, for example, to the desired scale, the 3/4 inch equals a foot, and say OK. [15:49]

And now when I double click on it, you can see how it updates. So, let me get rid of the view that I created, because it's not necessary, I'll just select it and click the X here, that button down below the View Map, then I'll delete it, which leaves the one that is in the clone folder. Now I'm going to go and place this on a layout sheet. So we'll go back to the layout book, which we have looked at a little bit in the last lesson. And let's say that I wanted to create a layout for details. So I'll highlight the subset for details. So this is the folder with the little number on it that indicates that any layouts within it will get some automatic numbering. I'll right click on this and say, "New Layout". So this is creating a new layout. I'll just call it "Details". So this is what will show up in the title block, is the name of the layout. [16:44]

And I'm using the same master layout here, "Arch-D" as I used for my other work. I'm actually going to change that in a minute, but we'll start with placing it, or creating the layout this way. So I'll say create, and you can see in a second that there is now a layout created. And if I zoom in the bottom right corner, we'll see that it says Details at the sheet title, and it automatically got a number A-501, because that's the organizing system for details in this template. Now I would like to have the detail sheet use a different master, one with a grid that will organize the details very neatly and number them based on their position. [17:31]

So what I'll do is with this layout highlighted here in the View Map, I'll click on Settings. And the settings, I can switch it from Arch D to a similar layout called "Arch-D plus NCS Grid". So NCS stands for National CAD Standards, and this indicates that there's a grid based on those standards. In the international version, it might be a different option, but there should be one that has a grid built in. I'll say OK, and you'll see that instantly the grid lines show up with some faint numbers indicating the system for numbering. And the system for numbering can be adjusted, but for now let's just bring in that detail and see how that works. [18:21]

So I'll switch back to the View Map and find the detail in the View Map. Press down on the icon for the detail, and drag it into the sheet. Now remember that the bottom left corner is where, in general, the settings for the drawing. So in other words, wherever I let go, that is where the bottom left corner is going to go. So keep that in mind. Ah, actually there's lots of room. Maybe I really should this at 1 1/2 inches equals a foot. So what I'll do is I'll just zoom in a little bit just take a look. And I'll right click on this drawing and say "Open Source View". So this is a very nice option when you're looking at any drawing on a sheet is to say Open Source View. And perhaps let's change that scale. So here's our view in the View Map, and I'll go to the settings for it. And I'll say, really we could fit this in at 1 1/2 inches to a foot. And I'll say OK. [19:25]

And it doesn't look much different on here, the text has gotten a little smaller, but when I go back to the layout sheet here, you'll see that it updates and then gets quite a bit bigger. Let's zoom out a little bit. And you see ah, that will fit in nicely. I just need to adjust its position as a tiny bit. So I'll go to the top of this view here, and I'll go and use the cropping to adjust the polygon outline and say "Crop it in", so it

doesn't actually go out as far. And I'll crop this in, select it, see and sometimes you need to zoom in carefully and be able to get that. Okay, so that now fits in. [20:15]

Maybe I don't need quite as much on the bottom. So I'll just bring this up, and you can see how now this fits neatly into the square. Now it says 5-D, and if I open up the little list of drawings, it shows by 5-D as the eve detail. And if I go back to the View Map and open up the section, we'll see that the section now has updated to show that the detail is drawing 5-D on sheet 8501. Now there's still the name of the detail included, which is making this look messy, and is a necessary. So I'm going to select the detail callout by clicking it with the Arrow tool, on any one of its hotspots. And then open up the settings for the detail. So the detail selection settings we can take a look. [21:08]

The first text row has the referred drawing which would be the 5-D. And the second text row, it says referred drawings, but if I open this up a little bit more by clicking on the triangle, it says "Show Name" is on, and "Show Layout Ideas" on. So I don't really want to show the name anymore, so I'll just turn that off. So your detail markers, you might be using a different style. There are a number of different styles here. But they'll always have some controls for what is included. I'll just say OK. And you can see how this updates nicely to show the callout. Now let me go back to the sheet and actually just perhaps move this and show what happens with the renumbering. So I'll just grab it by pressing down with the Arrow tool, make sure I'm using the pet palette option to drag the whole detail drawing, and position it in a different cell, for example 4-D. Maybe move it up a little bit to fit better in the cell here. Now if I go back to that section, we'll see that it updates to say 4-D. So the callout automatically matches. [22:19]

So let's move on to creating a worksheet which is a very similar. There's not a whole lot new to learn. So I'm going to go and zoom out here, and we'll switch from the Detail tool which we were looking at, to the Worksheet tool. Now the Worksheet tool was added into I don't know if it was ArchiCAD 11 or 12. So if you're in an earlier version like ArchiCAD 10, you may not have that. And you certainly can use the Detail tool for what I'm about to show you. But once we added the Worksheet tool to the Project Map, it becomes a convenient way to separate out details from other 2D drawings. [23:01]

So in this case, I want to create a wall section, which would be a great use for a worksheet. So again, I'll have the rectangular creation method here. I'll call this "Wall Section". So I'll just give a name in the Info box before I actually create it. We'll use a similar setting that says create a new worksheet viewpoint. So we're going to actually make a new drawing as opposed to linking to an existing one. And it will have a callout that will refer to the drawing on the sheet. So very similar to the detail marker. Now I'll go ahead and just click two points to create that rectangle, and then perhaps I'll make the call out just off to the side here. And you can see that where I clicked on is where the callout line breaks, although it says it's going straight across, it looks like one longer line. [24:00]

But another rounded rectangle has been drawn. And again, the same idea of showing a placeholder, a field reference, for the drawing ID and the layout ID, along with the name "Wall Section". So we'll take a look in the Project Map then we'll see that in the Project Map under Worksheets all of the sudden there's another one called Wall Section. And I can certainly double click here to open it up. I could have also right clicked on the marker to bring that up. Now you'll notice that it has the building information

and it does have the callout for the detail already copied as well. Now, this boundary we see around here can be removed. It's actually just a poly line. [24:48]

So if I select it, you'll see that it's got handles on it, and the icon in the Info box is the poly line icon, meaning that it's just a drawing element that was placed there. You can delete this, in fact I'll do that right now, and perhaps I'll go in and do a similar thing with the fills. Just say I want to select the Fill tool, go to the Edit menu, Select All Fills, and then Delete them. Now this is really optional, but I find it makes it a little bit easier, particularly if you don't need these fills and you want to draw in fills manually. I just deleted them, and now it doesn't look any different, because all those fills were white. Of course you wouldn't want to delete fills that indicated concrete or other materials, so be careful about that. Only delete the ones that you don't need. [25:40]

Now again, I'm going to go and put in the Label tool. And the Label tool still set at the ArchiCAD layer so I don't have to worry too much about that. And again I'll just belabor the obvious by typing in "Roof" here. And something I'll just point out the window. So obviously, the methods here in this are going to be very similar. Now what scale is it? It came in at the 1/4 inch scale, which was the scale we had in the section. And perhaps for a wall section I'd like it to be bigger. So I'll go and make it 3/4 inch here, and that's 1:16. So if you're doing it metrically, you could pick a scale of 1:15 or 1:20, or whatever was appropriate. It now got much bigger. The text stayed the same size on screen so it looks smaller in relationship to it. But, on paper it will be just as legible as before. [26:48]

Now, I'm noticing that we've got the door or part of a door showing from the elevation beyond this section cut, and that may not be very, let's say useful for the wall section. So I'll just delete those lines. Again, this doesn't delete the door; it simply just will simplify the drawing. So again, we can draw things, we can delete things. We can clean up whatever we need, because it's just purely a drawing. So let's go now to the View Map. And if we look in the View Map, we may be smart enough to say, "Oh, look in the Worksheets Clone folder, and there it is, Wall Section. And when I double click on it, it says its 1/4 inch to a foot. So, this view is not set the way we need it. Let me change the settings of the view, by having the view selected and clicking on the settings button down below, and then change it to, in this case 3/4 inch to a foot or 1:16. [27:46]

So that has now updated it. So when I look at the text, I'll see it in relationship to the building elements as they will be on paper. And when I drag it onto a sheet as I will in a minute, we'll be able to see how this looks properly scaled. Now we don't have a sheet for sections, so very quickly I'll right click on the section subset here and say Create New Layout. And we'll call this "Sections". And I'll use just the standard master layout for this paper size. I don't need a grid for this. Now, if I did want to put this into a list with others, remember I can right click on any layout and create a new layout right next to it. So I don't have to right click on a subset. I can right click on a layout here, or I can even click on the button down below here that says "New Layout". So that will work just as well. [28:46]

Now I've got this layout for sections, which is open, and I will switch to the View Map. And in this case I'm going to go grab not only the wall section but I will also grab the two sections. The actual building sections as well. Now to be able to select them, even though they are separated in this list, I can use the

Command or CTRL key to add to the group. So now I've selected these three items without any of the intervening ones. If I had used the Shift key to select it, it would have selected everything in between. If I use the Control on the PC or Command key while clicking, I can add to that list. Now I'm literally going to drag any one of them somewhere on to the sheet. And ArchiCAD, when I let go, will position them on the sheet based on some rules for that layout. [29:35]

So the master layout has some rules for how it's going to place information. Let's just see, when I zoom out to Fit in Window what happens. So we can see that the two sections have shown up on the sheet. Let me see here. Only the section showed up. That's interesting. I'm not sure why. It's not really a big deal. I'll just grab this wall section from the View Map again, and OK, now I came on. So I'm not quite sure why that didn't come, but let me just drag it on and move it into position. So I'll just move it down into proper position for that. And now if you look at these numbers, I'll just zoom in a little bit, you can see 1, 2, 3; which may be just perfect. But perhaps if I wanted it to be in a different order, how would I do that? [30:27]

You'll notice that in the layout, if I open or close the little group here, you'll see that they are numbered here. And in this case, they're numbered based on their sequence. So while I could manually change the number down in the properties, if I'd like to use Automatic Numbering, I can just simply move this up in the list, and you can see now it becomes number one, and on the paper it also changes to one. And perhaps I just reposition the two sections in the list, and now it goes 1, 2, 3 in the other order. So whatever order they are in the list will be used in general. That's true for any layout that doesn't have a grid; the automatic numbering will work quite nicely. [31:12]

So we've covered in this lesson then creating detail drawings and worksheets, and looked at some of the settings that will control the way they're scaled. We've looked at how you can adjust line work and fills and add in new adaptation into both details and worksheets, and a little bit more on how you place these drawings into the Layout Book. So this has been Eric Bobrow, I look forward to getting your comments and questions on the page down below. Thanks for watching. [31:45]