BEST PRACTICES COURSE – WEEK 23 Layout Book Drawing Options, Printing and Publishing - Part 6 - Printing and Plotting

Welcome everyone to the Best Practices course ArchiCAD training lesson. We're in week 23, and we've been covering all of the settings for layouts and drawings on layouts and arranging drawings on layouts. But now we're going to be looking at printing and how you can print those layouts as well as print any other part of your model. So if I go to the layout book here in the sample project and we open up, let's say one of the floor plan drawings here, we can go to the File menu and Print. I'm going to be going over the real basics for five or ten minutes, and then we'll be getting into some things that perhaps some of you don't know about, but I always think it's good to start with the basics. [0:00:48]

So if I say "Print", it will ask what printer I want. I only have my desktop printer here. I could set up for some other device, a color printer here, and I could change the paper setting. So whatever paper settings you've got here are going to be used when you tell it to print. When I go back to my desktop printer here, I might be able to go into the paper settings separately to say what type of paper it is. So I'm sure you're all familiar with this, but sometimes you need to set up your page setup first before you print. [0:01:40]

So for example if I say that I'm going to be using a larger piece of paper, like this A3 size - actually, here is a "Super B, A 13x19". That's actually a pretty interesting size. You can probably print out something reasonable on that size paper here. And I'll say that it's landscape. So you want to set up your paper size based on your printer and of course your needs. And then when you go to the Print command it will see how many pieces of paper you need at a standard 100% zoom. You do have the option of fitting to page and that will reduce it. [0:02:21]

Here you can see it's at 54% on the page, or I can do custom and say 50%, and that will then fit and be somewhat scalable because it will obviously be half of whatever the original size is. Now when you do use a resizing like this, the scale that is printed will remain. if you had it at 1/4 inch and you printed at 50%, it will be at 1/ 8 inch but it won't tell you that it's at 1/8 inch. If you do want to have a layout that you're printing and you want the scale to show properly at a smaller size paper, then what you might want to do is create layouts that are designed for that particular sheet size. [0:03:02]

So you could actually copy entire layout sets and change the master layout to a smaller size that would fit on that paper. And then on each sheet, also change the printing size of the drawing. Remember we can go and select any drawing on the sheet like this and then go and change its magnification from 100% to something else like 50%. It will then become effectively at that 1/8 inch scale or 1:100 roughly, and it could fit onto the smaller sheet. So if you do want it to read off that it's at the smaller scale, then you would want to do that operation. But I'll just undo the change here. [0:03:54]

if you simply want to print it on a smaller piece of paper for markup or carrying to a meeting or things like that, then it's fine to go ahead and do the Print command and just type in a different scale or just simply fit it to the page and say that it's not to scale here. Now regardless of what we do here - and I'll fit to page so that it is a single sheet - I can print the entire layout or I can print a zoom on the layout or possibly a marquee. So some of the options here are very interesting. If you had a sheet and you want to print just part of it, I could zoom in on this like that. [0:04:40]

And then when I go to the Print command I can say *I'd like to print the current zoom.* And it will print it at actual 1/4" scale because it's just going to print what we see in the background here. It will look at the page size and proportions and it will print that area. if you happen to have a window that you're looking at, whether it's a layout or any other one, let's say that it's square but you're printing on a rectangular piece of paper, it will take the square area as a center and then it will do the stuff to the sides. It won't actually crop just what you're seeing. So it's not quite as perfect as just crop it in exactly and change the boundaries and show what you want. it won't actually crop it, but it will of course focus all of that. [0:05:33]

That's an area that you should definitely know about. Now the zoom is sort of a simple way to it. Marquee is another way that you can actually do this. So let me zoom out to fit in window and then do a marquee. So if I did a marquee around let's say this area here, I can outline the marquee. I can adjust it and move the marquee around just a little bit to get it perfect. I can redraw it until I see what I want. Then I can go to the Print command and say "I'd like to print the marquee". And you'll notice that by having a marquee down at the time I invoke the print command, marquee is then available as an option here. [0:06:21]

Now in addition to these options for the marquee, zoom or the entire layout, there is an option here that says "Selected layouts in Navigator", which is very convenient when you want to go and say, "Oh, I need to print this floor plan and the sections." So Command or Ctrl clicking to pick more than one - maybe I would also need to do the roof plan or something like that. So I can pick multiple ones. If I use the Shift key, it will select everything in between. And then using the Command or Ctrl, I can deselect; maybe I don't need the ceiling plan or the finished plan or something like that. [0:07:02]

So we can pick these here. I'm still looking at one of them. When I go to the Print command I can choose do I want to use selected layouts in navigator, maybe fitting to the page or something like that. So that will print out several of them on your printer; one layout per sheet of paper. Some of the other controls you have that are part of the standard print environment, in addition to what area of the view you're looking at and printing and what scale would be the margin. The printer margin means that it's going to print out to what it thinks is the boundary that the printer can handle. Whereas the layout margin may be slightly different. [0:07:49]

There was just a slight change as I selected it or changed it, because I think the layout margin - you can see that there is a bit more of a gap for binding here. So we could potentially fit a different percentage on there. With the printer margin we could print it up to 54%; with the layout margin, there's a little less space than it thinks it has available. So you can play around with that to make sure that when you print and you have things right out to the edge that you're getting the results that you need. [0:08:28]

Now, there is header and footer. If I turn that on you'll see there are some settings here that allow you to put some text at the top and bottom of the drawing. So you can see "Project Name", this is the name of my project currently. Name of the story or the layout. Here's the name of the layout. The scaling etc. and the date and time and what font and size it will be and where is it going to be located. This would be in the footer right. So would be at the bottom of the page on the right side. So this is something you can check off different things here. [0:09:07]

Maybe just want to have a print date. You could have the project name and print date, your combination. So that is an option. Obviously it's less frequently used when you're doing an entire layout, because when you doing an entire layout, you will certainly have project name on there already and you may very well have the date in an auto text field. But if you just doing a quick print out on a small piece of paper for markup then that could be very useful. Now if you say "Black and white" what happens is all the line work, whether its red, green, blue or yellow, all of it gets turned to black. And that will work nicely. [0:09:53]

You just have to be aware that it probably will not show grayscale or light lines in the way that you're used to seeing them. So light gray would print a nice crisp black. And that may or may not be what you want, but you can certainly experiment with that. There's also the option for printing or plotting in hairline. So hairline would be all of the lines would be very thin. Obviously this uses less ink and also might make it a little easier to mark up some things up because it's a little bit lighter, more like a background sketch. So these are options you can experiment with and use when they are appropriate. [0:10:31]

Now "Print reference", that is an interesting thing. If you have a trace reference behind whatever you're looking at - this print dialog box will work when you're printing from a view as well as a layout. So you could be looking at the second floor with the first floor as a reference. If you have a reference active, then this check box becomes available, and it will then print that reference probably in a way similar to what you see on screen. In other words, if there are references in a light blue color, then it will probably printed in a light blue just like what you see on there. [0:11:09]

Now we're noticing the sheets here. This is an interesting option. If you do have something - and I'm just going to make this a custom size, let's say 25% - that's going to fit in the middle of the page. But I could say I would like to fit it just in one corner or the side center things like that. So we could pick a magnification and then choose where it's going to be sitting. Center would be the most common, and fit

to page or having something that's 100% would be the most common. But you can change the positioning here. [0:11:43]

If you are on a Mac, whenever you're in the print dialog, there is the PDF option in the bottom left. That allows you to save PDF files. I'm not quite sure on Windows these days how that works. I know we used to get a PDF writer or creation tool included with ArchiCAD as a separate printer so you would choose that printer "Amyuni PDF printer". But I believe that may not be available on Windows anymore, and in fact in both Mac and Windows, I believe you can now go from any view and say "Save as" and in recent years you now have the option to save as a PDF directly. [0:12:33]

So if you are outputting from your sheet, you can save as a PDF. This will give you just the current view. So unlike the option where we were choosing potentially multiple layouts, this would only be a single one. You could use, under Document Options, selected layouts. You could do several sheets in that PDF. You can do a marquee area instead. You have some various options related to PDF. So when we are talking about printing, we may be printing directly on our own device or saving a PDF that is just viewed on screen or is printed at a service bureau or given to the client so they can print out or give it to the contractor here. [0:13:31]

So there are some options in Document Options. And then there are additional ones for PDF options, which are something that you could experiment with. I know that in ArchiCAD 18 there are now some options to export the layers to PDF. I'm not sure why that is gray - let me see if I check one of these, no it didn't. it isn't making that available. So I'm not quite sure why the layers aren't there. Let's just see, it's not doing it there. Maybe in order to have the layers, we need to be doing it from - we're in marquee. I don't know why we wouldn't have the layers available. [0:14:27]

Layers are an interesting thing that were added in ArchiCAD 18 catching up with some other CAD and Bim software. When you are saving to a PDF, you can include the layers. And that means that someone viewing the PDF in Adobe acrobat could turn off some layers, maybe turn off the dimensions or turn off the furniture and things like that. So anyway, these are some options here that you can use specifically for PDF. We've talked about printing directly, and this is one way that you can save out a PDF. And the other way was when you do the Print command; you can have a PDF printer. [0:15:14]

so let's say I have Acrobat Professional here. it has a printer option, and I can do various things here. There may be some more options in the Adobe setup that I can work with. Or on the Mac you have some options here that are built into the Mac OS for PDFs. On the Mac here, when we are in any of these printer options, sometimes it gets confusing because here is the ArchiCAD options and then here are some things that are built into the operating system. So if I go into the Layout here, it's asking what the orientation is, how many pages per sheet. You could use this control to print a reduced size set. [0:16:03]

If you wanted to say I'd like to have nine pages per sheet, it would actually print, on a large sheet of paper, 9 miniatures if you were doing a multi-sheet set. So that's an interesting option. I'm not sure if you've ever tried that. "Color matching", again this is all Mac specific. There will be some roughly similar things on Windows. Paper handling might have to do with how the printer handles paper and whether it feeds it automatically or if it's manual, things like that. And "Cover Page" which certainly in a larger firm you might need to do a cover page when you're doing a print job there. And there are some options here that relate to Mac standard settings. So we won't go into that. [0:16:52]

The main thing to know is that ArchiCAD has this whole set of choices for what you're going to print out and at what scale. So we've very quickly gone through the basics and some more intricate features for printing here. Let's take a look at plotting. We go to the Plot setup, and it allows you to set up for any of the standard type plotters. Or you can go to a generic plotter and choose just a paper size here and the language that it speaks. Some plotters may not be listed, and they may just say that they can accept a standard plot file or .plt file. This is typically an .HPGL2, that's just a computer term for the Hewlett Packard graphic language version two. [0:17:52]

So it's a way to send over plot files for large format. And "Repro Desk", which is what I understand is a service bureau chain or a company with many locations and may have its own variation with their own devices that you can use their printer language for it. The most common that I'm used to would be working with Hewlett Packard. And in fact you can often use the Hewlett Packard driver or choice to work with these other ones. But the basic idea is that you're going to pick either a specific model -I remember one of the ones I used to use here was the 755CM here. It could do certain paper sizes like this. [0:18:43]

or if you had one of the smaller ones, there's a 100 series - maybe it didn’t go through plotting, maybe it was through the printing command. if I do the 230 or something like that, then it might have different options for printing and different options for the margin. So you'd want to set it up for whatever is appropriate plotter that you have in your office. If you do make changes while you're playing around, you can save it as a default for the next time, but I don't need that, so I won't save it. Basically I'm picking, in my plot setup, the page size. And remember when we're looking at the master layouts there's an option to say I'm printing out on this size paper or I want to get the settings from my plotter or my printer so that the margin is set automatically. [0:19:42]

So if you set this up ahead of time then when you import the settings from current plotter it will use whatever you set up. Another is the option for setting up a connection here. This is something that I can't really teach because I don't have one that I'm connected to. Basically, when you have a plotter, it probably installs some software on your machine. And you can then select that particular plotting device that has been set up. So I'm assuming that it would show up in your list here and that would then say, "OK, it's on the network, it has a certain address." In the old days it has a certain serial port or parallel port connection. [0:20:34]

The "Spool folder", this is something that I'm not quite sure how it works these days. I remember that we would have an option to print multiple sheets or multiple projects. And instead of printing directly to the device, it would go to a folder. And then we had a separate utility called "Plot Flow" that would look in the folder every 5 minutes or 1 minute and get the next job and go ahead and put it into the actual device. So that's something I know was discontinued a while back, but if you have a specific need for a plotter with spooling, then this would give you the option to select which folder it's going to go to. Then your plot spooling software would be set up to look at whatever folder that is. [0:21:35]

So you would say, "I want to use this folder as my spool", and then you would have your plot utility look there. There are some options for when you are doing the plot setup for which way the paper is feeding. you can see there's landscape and portrait mode. This has to do with which way the paper is being fed in. so for example, the carriage of the plotter may be let's say horizontal and may be 3' across, but the paper is 4' across, so this way would be feeding it in the short side. And it has the long side here whereas that's actually indicating that it's going down. [0:22:28]

this is something I was never very clear on. I would make my best guess when working with a client and setting up a plotter and within one or two tries we would end up getting the print to come out facing the way we wanted. These things can change the way the paper is laid out onscreen, because it will typically match that. So that's basics of the plot setup, picking a device and picking a particular size if you have a roll feed, what size paper is that roll. And then if it's a roll, where you want it to cut. So there are some options there. I guess you can have a custom size and just type it in. That might be good if you were mounting something on a board and you wanted to tell it to use a certain size and make sure that it's going to fit on the board properly. [0:23:36]

Now if I go to the File menu and go to Plot, having chosen that, you can see that it allows me to go directly to the plotter or to create a file. and you'll notice when I do that it says "Save". If I go back to "Plotter", then it says "Plot", and that will go directly to that particular device. You'll notice that it's fitting inside here. That's because this particular piece of paper, 24x36, is not the same size. It's smaller than the plot setup that I had done. So the plot setup here was a large sheet. If I take it down to the D size here, that would be more of a match, and you can see how this works. [0:24:12]

What you want to do is make sure that you're always doing it at 100% with rare exceptions. Occasionally I've seen a mismatch, and people said, "When I'm plotting it, it just doesn't scale properly. I take my ruler and 61' measures as 60' or 59'8". So that is a case where it might be 3% difference in the scaling. So if you have a mismatch between the plotter margin and the layout margin, if your layout was set to go all the way to the full size of the sheet and it was trying to fit that onto the plotter paper, then it might say, "In order to fit it to the page that has to be at 97%", or something else. [0:24:59]

So when you're first setting up a new device or getting ArchiCAD set up at the beginning for plotting to a device you have, want to make sure that you coordinate your layout margin and import it from the

plotter so that plotter margin and layout margin are the same. Right now you can see there's a little bit of an issue. I'm not quite sure why this is showing red here, but plotter margin certainly tells it that it shouldn't try to go out beyond what the plotter can handle. The main thing is that you want to make sure that this is 100%. You don't want it to be larger or smaller, because otherwise you're going to have some confusion. [0:25:46]

Here's your option to do hairline. Just to clarify that, you can choose under the Display Options - so zoom in on this here - you can choose under the View menu, Onscreen View Options to show or hide true line weight. here I am showing it. But regardless of whether it's showing or we're looking at in hairline, when we output, it will do it with the weights that we would see if we said "True weight" unless you checked the hairline. If you check "Hairline", it will look more like this. Now plot with color, grayscale, or black or white, obviously some devices are able to do color and others are not. If you want to have something with some subtlety, then you would want to have either grayscale or color. With black and white, every line would be black, and it becomes harder to differentiate certain things. [0:26:45]

so in general, I think gray scale is a good choice if you're going to be reproducing in color if your device can handle that. So you can see there is the option for "Selected layouts in navigator" or "Active layout". This actually does not allow us to plot just the zoomed view. So "Printing" allows us to do that and saving PDF, but when you're plotting you're getting the whole layout or multiple layouts if you choose that. So that's the basics of outputting for the plotter. [0:27:23]

Let's see if there are any other things that I've forgotten about the basics here. So we have the plot and page setup for choosing the paper and which device. We have the Plot command which has most of the same options just not the marquee or zoom. The Print command which will give you more flexibility. And in fact many of the plotters these days are set up as printers. So even though you might call it a plotter, it functions using the Print command. So I think we have that covered. Let's see if there in the questions. I will take a sip of my coffee and then we'll proceed onto the second half here. [0:28:05]

Dave Norman asked, "If you want to print a site plan with gray scale survey drawing in the background, can you suggest a best practice?"

One option that you may have here is that you can overlay drawings. So I'll just demonstrate it here. This is a demo plan and this is a first floor plan. This may not be the best example, but I'll just show you. This particular drawing, instead of putting in separate here, I can drag this. And I will grab this corner and put it on top of that corner there. And you can see that I have these two drawings overlaid. Of course, I also have a little confusion with a title. Let me take this particular drawing and say that I don't want a title on it. [0:29:05]

So now you see it just says "First floor plan". in this particular drawing I'm going to go - and it is the demo plan here - I'm going to go into its settings and change it from "Standard pens" to "All gray". Now you can see that is all grayed. That happens to be on top, so it's sort of confusing the issue. Let me go and say Display Order, Send to Back. We're not seeing a whole lot here. But you'll notice that this demo plan now shows up in gray behind the other one. What that's saying is we can overlay drawings behind each other. So you are talking about you want a site plan with gray scale survey drawing in the background. [0:30:06]

so that's one option is the survey could be a .DWG or other file, maybe even a PDF that you place behind your site plan drawing and just have a different setting for the pens so that it looks gray and looks like a background. The other possibility, if this is a survey, maybe the information in the survey you put in certain pens, and then those pens - even if it's a single drawing, use a pen set that makes those particular pens a faint background color. So those would be the two options that I would look at. Either overlaying two drawings and having control for the background one separately from the foreground or using pens to differentiate certain element categories from each other. [0:31:01]

Another variation of that, think about having a high-rise building with a lot of stories having the same floor plan but with some different numbering. The rooms are 301, 302, 303, and in the next story they are 401, 402, etc. There may be some variations, but let's say that the overall dimensions of the building are the same and you want to show it on the drawing. In MasterTemplate we have set up a layer for repeating dimensions. So we could have a drawing that is the repeating dimension drawing that is going to be shown on floors three through eight, because it's relevant to all of them. [0:31:51]

And we put that as an overlay. So we put that those dimensions on it. So we don't actually have to dimension each story, we can just put the common repeating dimensions that maybe comes from the third floor and create a view of only the dimensions, only that layer, and then put the drawing behind all of a fourth, fifth, sixth, seventh, eighth stories. So overlaying one on top of another can be used for a variety of purposes. I've also discussed that same approach when doing a split level. There are times when it may be convenient to have part of your building in one view where the cutting plane is at a certain height and then another part of the building that is the same story and on the same floor plan with a different cutting plane so that they just look graphically clear. [0:32:51]

when ArchiCAD is actually generating it from two or more different views. You can then put them side by side and just make them cleanly touch each other. It will look like they're one drawing if you do it properly. Dave Norman says, "Thanks, that works."

Fadhil Utman, I think this might be your first time here in the training lesson, so welcome. Fahdil says, "Eric I'm very new because I just one week ago signed into the Best Practices Course. Should I stay in this class?"

That's really up to you Fahdil. This class we're going to be looking at, in addition to the printing and plotting that I've just covered, we are going to be looking at printing and plotting just normal views. in other words, if you want to print out a floor plan or an elevation, how you do that. [0:33:51]

I think these are things that are the basics. Even if you are just getting started with ArchiCAD you can probably follow the key ingredients, but it's up to you. These calls certainly are intended to cover a certain subject, and if you feel it's confusing and frustrating, then feel free to watch the recorded lessons and go through the QuickStart course for example and additional training until you're ready for any specific topic. [0:34:22]

He says, "Thanks a lot dear Eric." You're very welcome dear Fahdil.

Let's go look at how printing and plotting works when you are not on a sheet. What do I mean by that? Well, if I am in a view like the first floor plan and I am working on this, let's say I want to print this out and take it to a meeting. I don't necessarily need a title block. it could be the whole drawing or it could be a zoomed in part of it. Guess what? It's the same commands. I can go to Page Setup and say I'm going to be working with my desktop printer here. I have a standard small letter-sized printer size paper here. It's going to be put in this way. And I will say it's at 100% in terms of just printing scale. [0:35:24]

Having set that up, now if I go to the Print command, it's telling me that when I print, if I don't have all the drawings or all the hotlinked modules linked, it's warning me that they may not be up to date. That's not an issue here. let's just continue. When I do that, I can print it at the original scale on two of these small pieces of paper or I can say "Fit to page" so that it would be at sort of an odd scale. Or I could say that I'd like it to be at the 1/8" scale here. I could choose 3/16" or something like. 3/16" wouldn't quite make it. 1/8" would fit. [0:36:16]

I can do the choices that would make sense for my needs, just print it out smaller or fit it to the page not scaled, just for markup, or put it on possibly more than one of the small sheets and tape them together. Now if I'm not at the original scale, let's say I'm at this other scale, I do have a choice of resizing from this view. Remember, this is in a view rather than the layout. So the view is designed to be printed at a certain scale, 1/4" or 1:50. The bubbles and the text are all set up to be legible and standard size at that scale. [0:36:59]

If I am printing it smaller do I want these things to reduce just like a photographic reduction, or do I want to fix the text? You'll notice when I do that, it gets larger because these bubbles and other text and things will stay the same size. The building will get smaller but the bubbles will stay the same size on paper. So this is actually more similar to switching the scale of the drawing 2 1/8" before I print. Fixing the text would be equivalent to that, whereas if I say resize, everything's going to shrink down proportionately. [0:37:43]

The best way to see the difference is to try a PDF. So let's look at doing this 1/8", half of normal size, with it resizing and save this a PDF. I will go here and say "Test one-eighth resize" here, And then I'm going to go and do the same thing, Print, and instead of resize it will be fixed text here. And print. I didn't mean to print - that's going to go to my printer. We'll use the PDF so we can look at it onscreen. I will say "Save as a PDF". And let's do this with fixed. [0:38:36]

OK I have two examples. we'll open those up here. Here is the resized one, so I'm going to open that up. And you can see it looks just like we had onscreen because it's been reduced. Everything is reduced and has the same proportionate relationship. Of course this text might be a little hard to read because it's half the size it would be normally. If I look at the fixed size, then you can see how the building - and I will put these side by side - the building is similar here to that, but the bubbles and the text stayed the same printing size. [0:39:29]

It's more legible in the sense that they are the original size that was set up, but of course things start to overlap each other, because everything is a moved closer together based on the reduced size. So that is an option that you can do depending on your needs. If I were to change this from 1/4" to 1/8" like this, just to see what happens, we're going to see a similar result. You can see how everything is just starting to overlay. So when you say "Fix it", it means that it's going to treat it as if you'd changed the scale. When you change the scale, these elements are fixed on the paper. They are fixed in a certain print size to make it easier to read or more legible. [0:40:22]

When you say "Resize", everything photographically gets smaller and may get hard to read. So let's go to the Print command again. We have similar options for "Entire drawing" or "Current zoom" or "Marquee". I don't think I need to demonstrate. Basically, if you have a marquee drawn, it will give you that option and figure out the scaling for that. Again remember, it doesn't crop it based on the marquee, it will just use that as the determining factor for the scale. But if I did current zoom here - let's just do a marquee. [0:41:05]

if I were to marquee the kitchen like this and say Print, then it would have the marquee. And if I said "Fit to Page" - you can see I've made a roughly square marquee - it will print the stuff down below here, so it would get part of that staircase down below or the section marker up above here. So it will fit this on, but it will also print the stuff to the side, it does not just crop it. So in case you were hoping for that. [0:41:39]

Now we have "Resize to printing scale" is probably the best default. Whatever you see here is what you'll see in some version on the sheet. Again we have the header, footer, black and white options. Now "Print Grid" is something we didn't have before. We have the option in ArchiCAD to have a grid behind our drawing to provide scaling and a sense of reference. We can choose to print that. So if I turn that on it would print those lines. [0:42:17]

If we had a reference - so let's see how that works if we have a reference. I will go and show the second floor as a trace reference. Now you can see the trace reference is in red. It's sort of a faint red. If I go now to the Print command, we would have the option for printing the reference here. And it would be the same red I believe. If you want it to the fainter, in other words, if this is not as helpful, then we can go in here and go to- for some reason I'm missing my main toolbar, it's sort of slipped down there and I don't know why that moved over. [0:43:07]

Let me reconfigure this here. so in the trace and reference I can turn that off or turn it back on using this little icon. And I can go to the Trace and Reference palette from the popup menu and then change the reference. I can make it fainter, so that's going to be a little harder to see, or I can change its color of course. Perhaps a blue or a gray might be more appropriate; something like that. And we can actually choose any color we want. "Choose other color". So let's make this a purple color or something like that. And then once I do it in purple, I can make it fainter like that. [0:44:02]

So that's how the reference would be included in the Print command here. And we have the same thing about positioning. if it is going to be part of the page I can put in one corner or another. Sometimes that might be useful for saving paper. You just want to print something out, it's not going to take the whole sheet so you put it up at the top of the sheet and print something else or you just use the bottom for sketching or something else. So again, these are the ArchiCAD options here. If we go to these other ones, these are part of the standard Mac OS. And there will be some similar ones under Windows for how the paper is being fed, cover pages, ink and things like that. [0:44:50]

Now if we go to the Plot command, it has similar options to what we saw in the layout book. Again, we don't have the option for a zoom or a marquee. It will do the original scale or it will fit to the page here. So this is just a single drawing and it would fit - of course, this is a large size sheet so would fit easily at a larger scale. You'll notice that some of them are gray and won't fit on here. So unlike printers, it assumes that it should fit on one piece of paper. it's not going to plot out multiple sheets that you tape together; you would have to use the print command to do that. [0:45:39]

So here we can go up to 1/2" scale, 1:24. Or the original scale of course would fit in the middle. Here's your plot grid, same as the print grid, and hairline. it looks like we don't have an option for plotting the reference. If you do want that reference for whatever other view you're showing, then you can't use the plot command. So in general the plot command is a little less flexible. Devices that can only be connected with the plot command may not be as sophisticated in terms of graphic controls. So that's the tradeoff, but of course it may print very fast with large sheets of paper. [0:46:30]

So let's see if there are any other questions here. Ken Brooks asked, "Can I print a marquee area of a drawing and print it on an 8.5x11 printer assuming it will fit?"

Absolutely. You can use the marquee area or a zoom. So I've got a marquee here and I can do that. I could of course use marquee around the whole thing, but that that would essentially be the same let me just demonstrate that. Say I happen to have this around the whole thing here and I go to the Print command. Then you can see that "Fit to page", that's this size. This is a marquee, or entire drawing is exactly the same. So the marquee happens to be the same as the entire drawing. On the other hand, if I do a marquee or just an area for let's say this back corner of the building here, then I can go to the Print command and with the marquee option it will print at 1/8" scale or could be a much bigger. [0:47:47]

It could be the original. And I wonder why this says "Original, 1:69", that's odd. Original scale is quarter inch and here it fits neatly. So that's an odd thing, I don't know why it got confused. But yes, you can do the marquee or you can do the zoom. The zoom is just a little bit less easy to be precise, but of course if you are zoomed in on an area, you're looking at it and you might say, "Oh, let me print this out." And it's very convenient. So a little less precise but very convenient. [0:48:21]

Okay so Joe, "Joined the session late. Is there a "Print Preview" option to see exactly what will be printed?"

Actually there's not that I know of. If we go to the Print command here, we have - and let's just say "Fit to Page" or something like that, I can't see a preview of it. I can't see what this is going to look like. The only way we could do it - and I'm going to be printing this on the printer - I could print it to PDF. So let's just say PDF here. And we'll say "Marquee test PDF". That would be one way to do it. It's a bit tedious, because I have to save it as a PDF and open it up separately, but that's pretty good. Then go ahead and print it directly from the PDF or go back and print it from ArchiCAD. So that would be the best way to do a preview. [0:49:25]

It's possible in the Print command that in this, when I go print, it's going to go straight to the printer here. So let's just go back to Print here. I think there is an option to "Open PDF in preview". This will do it in one step and this is on the Mac. I'm not sure on Windows. It's basically going to save a PDF and open it immediately in the built in preview application. So you see I've just selected that. It brought it up here and I can look at it, and I'm in "Preview". And in "Preview", I can go ahead and print. So essentially that would work much the way you want. You can say "Open PDF in preview". If you like it just go ahead and print from preview. [0:50:20]

So it's a separate application rather than a dialog box within ArchiCAD. On Windows I am not quite sure what the options are, but certainly you can save as a PDF and manually open it. Or maybe on Windows there might be a print preview built into the print drivers.

Robert Mintz says, "Save the view with reference as a PDF then plot." So in terms of having a reference, I've got this here. We talked briefly about how the plot command would not allow me to have a

reference. Of course, if I go in here and I print then I can have the reference. And I could also print to a PDF or save it as a PDF. [0:51:17]

Now if your plotter allows you to output from a PDF where you open that PDF in Adobe Acrobat or Adobe Reader or some other tool and then output it, great. But then most likely your plotter can be handled with the Print command. In other words, even though you call it a plotter, if it can handle PDF then it probably has a print driver. I know some of these plotters - I used to sell plotters, but it's been a long time - they would provide both a print driver and a plot driver. [0:51:54]

Now the idea was, if you had something like AutoCAD, and it didn't at that point have a print command that would work, it only had a plot command, then you had a plot driver. And you could just plot to that driver and everything was happy. On the other hand, if you had the ability to print from your program of choice like ArchiCAD, then you might as well use "Print". Or there might be some subtle differences like one of them could have spooling and the other one might not. So the print one might have a spooler and the plot one might go directly to it; I don't know. [0:52:30]

But in general, I would say most devices will allow you to print. And plot is probably used less frequently and it's just a less sophisticated in terms of its graphic options. Okay, so Joe says "Thanks for the earlier explanation."

Todd asked, "Please explain print presets." That's interesting. What are print presets? So if I go to the Print command here and there's presets here. This I think has to do with your operating system, so it's not as far as I know something specific to ArchiCAD. But here I have just a standard inkjet printer that I use for printing things out, letters and other documents. I don't do construction documents with it. The default settings here is a preset, and then there are some other ones. [0:53:35]

So if we look here there's one called "Photo paper". So what does that do? If I go under Paper type and Quality, it's saying that it's expecting that it's going to be using "Premium photo paper". If I switch this preset to "Plain paper best", you'll notice this says "Plain paper best". So the preset here has to do with the printer options for paper handling, the quality may be whether it's borderless, how much ink to use. Sometimes there is an option for color matching here. So these are fine tuning for the actual device. And they exist here on the Mac. [0:54:16]

There's probably something roughly similar on Windows. But basically, when you're switching paper types - like sometimes I'll be printing regular correspondence on plain paper and then sometimes I'll be printing a brochure or something like that. So I have a preset for the photo paper, because the brochure might be on a glossy paper there. So that's what these presets are about is what type of paper it is. I don't quite know if it has the page size, because photo paper here, this is - let's just change our, paper handling, page order, pages to print, layout. I'm not sure if this has to do with the size of the paper. And here's the ink volume and things like that. [0:55:16]

That would be under the Page Setup where you are choosing certain paper size. And of course there will be built-in ones and then there might be some custom ones where you can actually define your own paper sizes. So these would be specific to your operating system rather than to ArchiCAD. Todd says, "Thanks." [0:55:44]

Ken says, "Do you know what the value of post script is? I have the impression that if you're on a Mac that it must be employed."

Interesting. Postscript is a printing technology that was pioneered by Adobe. It was really amazing in its day, and it's a really hardly talked about; I hardly hear about postscript anymore. I think maybe if you're a professional or if you're print shop or something there may be some things with postscript that you might pay attention to. It was a way to be able to get high-quality output from page layout programs using fonts. [0:56:29]

Remember in the old days you started to experiment, "Hey! I can use this Helvetica font or Times font or these fonts." And people had a lot of fun with it. Well postscript might be a way to create a print file that would carry the font information along with it. I haven't even thought about postscript for many years. When I think back to it in terms of an architectural office, Hewlett Packard has devices on the Windows side that have the ability to be printed or plotted, but on the Mac there was only the plot option. And if you wanted to be able to print to it, you had to pay more for a post script extra on your plotter. They charged an arm and a leg. [0:57:25]

If it was a $5,000 plotter, you might have to spend another $1,000 or $2,000 for the postscript option which allowed you to print from the Mac. One of the things that happened later on is that Apple of course switched over to Intel chips and they just got a whole lot more compatibility with Windows devices. So now there are some tools built into the Mac operating system that allow you to print to virtually any printer device on the market. So you wouldn't even need any more even for those older plotters as far as I know. [0:58:00]

So I'm dancing around the subject. As far as I know, postscript is not a big issue or it doesn't even particularly make much of a difference in terms of output quality compared to printing with postscript. So hopefully that at least gives you - so Ken says, "Thanks Eric. I did pay extra for a postscript printer." So it might've been important at the time, and I think it's probably not a big deal now, but it would depend on the printer. I know that on the Mac you used to need postscript to be able to print to certain devices, and now you don't in many cases. [0:58:48]

Dave Norman writes, "Sorry, stepped away for a minute." So I may have answered it. "As a follow-up question, is there a way to drag a drawing with a grayscale trace reference onto a layout and have the reference print?"

Okay so I did go over your question about the site plan and the grayscale thing and you said that works for you. So I'm not quite sure what you missed. Basically, when you're printing, the reference is available. There's a check box saying "Print reference". If you're plotting, you don't have that and the best way to simulate it is to overlay two drawings on top of each other and control the background one with a pen set. Say you want the pens to be changed to be a light color and look like a background. [0:59:44]

So you can drag two drawings on the same sheet and instead of being side by side have one on top of the other and turn off the title so it only looks like there's one drawing there with a title. And that will give you that option. But if you have a reference and you're printing you can also do that. so you could reference the survey sheet underneath the site plan sheet for example; something like that. Okay I think we're at the hour mark and we've gone through all of the printing options that I think are important. [1:00:24]

So next time we'll be looking at publishing. Publishing is a way to take your projects and share it with others. printing is one option for publishing, but we do have options for saving PDF or DWG or even some other formats and doing that for a single view or layout or many at the same time. So the simplest and most compelling example is to save a PDF with all of your sheets in it, so that it becomes the layout book in a form that can be printed at any service bureau or hand it to a client or contactor digitally. That is one example, but you can also send out DWG's to your consultants. And there are other variations like that. So we'll be looking at that next time. This is a good place to stop, so please add your comments and any follow-up questions on the page down below this recorded video. This has been Eric Bobrow, thanks for watching.

[END OF AUDIO 1:01:43]