BEST PRACTICES COURSE – WEEK 19 – Renovation Projects PART 2 - Renovation Using Horizontal or Vertical Displacement

Welcome everyone to the ArchiCAD Best Practices training lesson on renovations and remodels. This is week 19 part 2. We will continue on from where we left off in week 19-1 and look at a different variation for how we can work with existing buildings and new or multiple versions of the same project. So here I have the existing building that I was working on in 19-1. I will save this as "19-2" so that we can keep this separated. Let me first save this and make sure I have a copy and now we will do "19-2" here. [0:00:46]

Now in this particular approach, we are going to copy the file horizontally or vertically to create multiple versions. Here we have our existing building. A simple thing that you can do is take the entire building and - let's zoom out - I will drag. Hit Command+D or Ctrl+D and Option or Ctrl will give me 'Drag a Copy'. You can also use the Drag a Copy command directly. I can go and move this off to the side. In general, if you are going to do this I would recommend that you move it to some distance that looks good and type in a value. [0:01:36]

For example, this was 96'; I will make it 100', so that I can easily coordinate it. If I do make some changes in one side or another, I can drag copies back 100' and I know they are going to fit in nicely. So let's do that change that I had earlier. We will go and drag this over here and take these two and do that. So now I have a new version here, and I have the existing version. And of course we could have several different schemes, each one having their own versions. So the simplicity of this is you do it on the fly, you drag a copy of the building over, and you can then look and say - alright, let me just say that I haven't put any windows in this one, but let's say that we are going to put in a bunch of windows on this building that didn't exist. [0:02:49]

So now if I go to 3D, of course I can potentially compare the two versions. That is nice is that you can see them side-by-side. And you can potentially if you want to look at one, you can use the marquee tool. And you show only what is in the marquee in 3D. Now you can focus on just the new design. Now the marquee tool can select things that are on one or multiple stories. That means that if you did have a multiple story building, you could control your visibility in 3D that way. Now this particular approach is not really ideal for creating your full set of construction documents because you are going to have multiple versions of the building, or at least two if we say existing and new. [0:03:46]

This means that you are going to have duplications of doors and windows and other things that you might schedule. And while there are ways that you can control that, by designating the windows or doors in the existing building with a different ID and filtering them out so that you are only listing the ones that are in one building, it probably is somewhat of a hassle to do that. My gut feeling is that this is good for your design process, meeting with a client and exploring some things on the fly or showing

three different versions of your project options in a meeting. Or possibly a charette, if you are working with a design team. And this is all very intuitive and natural, which is its big advantage there. [0:04:36]

You wouldn't want to complete the project with several versions of the building there. Now I want to point out the heavy marquee with multiple stories. Let's go here and I am going to go and cut this roof and go to the second floor here. I will show the first floor as a trace reference. Let's say I am going to draw a box of walls on the second floor here and paste in the roof. The roof is not going to be like that. This is an interesting thing. What would happen if we were adding a second floor on this? That would make it interesting. [0:05:35]

So let me just undo back here, and let's say that we are going to go into the second floor. So what would we do here? I will go up to the second floor and it's now showing the ground or first floor as a trace, because even though I undid my deleting of the roof, I still have the trace and reference turned on with that. Now in terms of this roof, maybe we can change this to - well first let's do a quick sketch of the wall concept here. Let's say that we change this upper roof to only cover the upper area of the building. This roof is set at 10', so it's above the lower story. I am going to cut it, and now - actually what happens if I paste it? So this roof here, actually it doesn't matter if I paste. That's interesting. When I pasted it, it came in as zero relative to the home story. So that means it's at the base of this story. Let's put it up at 10' or something like that. [0:07:17]

This is now above that. If we look in 3D, we can see that I've raised that up. If I say show everything in 3D, we are going to see other walls that I just drew on top of the building. I drew those other walls with the interior wall settings, so that is why they are not working. So let's go back and clean that up. I will take these four walls here and eyedrop the lower wall and inject with the syringe each of these walls. This is a nice trick. If I use the Option key or Alt key to get the eyedropper to pick up something from another story, it's in the trace reference. And the switch to the syringe by holding down Option+Command, or Alt+Ctrl, and inject it in. and now if we go back to 3D, we see the walls stack nicely. [0:08:21]

Of course we do have this issue here of the roof. This brings up something that is just a simple modeling change, but can be confusing for people, particularly for new users. How would you change this roof without starting over so that it only covers this area? This roof has a pivot line going around. You can see that it's following the original wall outline. I can edit the pivot line. Now the roof is thinking it needs to follow this rather odd line. But I can edit this and pull it in, and now the roof is actually covering just that area. So I wasn't editing the outline of the contours of the roof, I was editing the pivot lines of the roof. [0:09:13]

So I don't want to pull this out, in fact, I want to simplify it. I want to get it so that it's one line here. So now we've got a simple roof structure there. Now if I wanted to get the other one, I can go back to the ground floor and select this. I will drag a copy. So I am going to drag and make a copy and do that same

100', remember that 100', that's why I like this, because I can easily copy things from one side to the other. Now this roof here I am going to go and edit the pivot lines. I am not quite sure where this should come to. Let me take it to this line here and pull it in there. So what it did was it actually now is a box. If we look it's not going to be right, but it's getting to the right idea. Now we do have this funny stair which should be in the other part of the building. [0:10:13]

But perhaps we don't want to have this hip here. I can go, even in 3D, and say that this edge here, I can press down on the blue line and say that I would like to change the edge to be pitch rather than gable. Since this is going to bump into the wall, make it have no overhang. So now you can see very quickly I was able to make it a gable and stop it dead where these walls meet. Now we at least have a possible new way for that building to exist compared to the original one. So at this point, we have an old and new version in the same file. They are horizontally broken up. We could have multiple ones selected and copy them several times around and experiment with this. [0:11:14]

So I think that's pretty straightforward in terms of basic modeling study. If you did have a multiple story building and you were trying to copy it, you wouldn't want to go and select it with the arrow tool. Right now we are on the ground floor. Let me show you what happens if you drag a copy of this down. If we go to 3D, we are going to see that it only dragged the stuff that was visible on the ground floor because I used the arrow tool. It copied the walls around the ground floor and the roofs. The reason it copied both roofs is because the upper roof had a setting saying 'Show it on the ground floor'. [0:11:58]

So I am going to undo that change and let's go to the Marquee tool, where we can select the area that this building is in and make sure we are in the heavy marquee rather than the thin one and make sure we have nothing selected. Now with nothing selected, it looks like we might not be able to drag because there are no handles. But in fact, having the heavy marquee allows me to do things like drag or rotate or drag a copy. And this will affect all the stories. So if I take this down, let's say that this is going to be 60' or something like that. Now ArchiCAD is giving me a warning that as a result of the last operation, elements have been created or changed their position on currently unseen stories. [0:12:48]

Of course, I'm looking at the first floor. It's telling me that some things on another story, obviously I wanted it to copy the walls on the second floor as well, so this is perfect, I just say 'Continue'. If that was unintentional, then I might want to say 'Undo'. So now, you can see they come in. they do have some handles right now, but we want to make sure when we are doing the operation that there are no handles. If we had handles, it would only move or select or copy the elements that have handles, which are the ones that are visible on this story. Without the handles when I do it, now if I go to 3D, you can see we have a complete copy. [0:13:31]

So the rules for that in terms of dragging a copy of the building around are that you want to have the marquee tool in a heavy border. You want to make sure you have all the layers turned on that you need, because if the layer is hidden, in general those elements will not be affected. If there are groups that are

part of this - perhaps you grouped your kitchen cabinets together or something, groups will move even if some of the layers are turned off. However, if any of the elements are locked or a layer is locked, then that group of elements will not move. So be aware that the only way that hidden layers will be affected is if they are part of a group. If they are part of a group and that layer or any layer happens to be locked that the elements of that group are on, then it will not move those elements. [0:14:34]

So this is one approach to working with this. I think the simple thing to think about is after you make decisions, you should clean this up and work it into a single version on the file and create your working drawings. That would be the straightforward method is to, at some point, make some decisions and only pursue the new one. Of course you can save a copy of this so you have a record of where you stood when you last had multiple versions. In fact, I recommend that you periodically save copies along the way. [0:15:20]

Unfortunately with ArchiCAD if we do a Save As it will give it a new name and will immediately begin the new named file. What I would prefer is some programs have an option to save a copy that allows you to save a copy out from your current work. That way you will remain in the main file without changing the name. The way to work around that is to save it from your operating system basically. Go to here, and go to where it's located. Here this is week 19. So if we were to take this existing building and drag a copy of it, I could say 'Copy' and 'Paste'. You can see here is the copy. I will call it 'Record copy'. Be aware that this copy won't update. It's a copy of this particular moment in time. If I keep working on the existing building, this fill will develop and that one will not. [0:16:35]
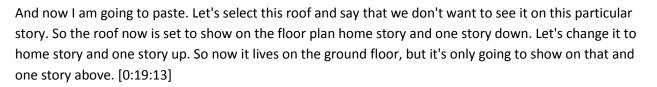
When you try to open this one, it may say that the file is in use because I copied it while the file was open. You will notice this .lck file or lock file which ArchiCAD maintains when a file is running. Somehow it also makes a note that even when you create a copy of that file, if it was open at the time, it probably will give you a warning. At least that's what I recall from experience. You can always say that you want to have exclusive use, if you are the only one working on it, and if you did want to open that record copy. [0:17:16]

So that is a horizontal displacement. There is another interesting version that I learned from another ArchiCAD user, an architect in Los Angeles who used to actually do training for me when I was working as a reseller. I had my reseller company called Bobrow Consulting Group in Los Angeles. So Abeer Sweis, or Abby as she is known, taught ArchiCAD for me as well as at UCLA extension for many years. She has her own design practice and is a talented architect as well as a teacher. So what she did was created a version of the file on remote stories. So here is the way it worked, and this was way before ArchiCAD 10. I think it might have been in version 7 or 8 that I saw her working with it. [0:18:12]

So let's say that we had this existing file here. Ignore the ones that are off to the side horizontally. I will go and select all walls - or select everything in this area, and deselect the roof. I am now going to create a new story. I will create a new story here and say "Existing Ground Floor". I will insert it below here.

And now I am going to paste. Let's select this roof and say that we don't want to see it on this particular story. So the roof now is set to show on the floor plan home story and one story down. Let's change it to home story and one story up. So now it lives on the ground floor, but it's only going to show on that and one story above. [0:19:13]

It's not going to show on this one. If I turn off the trace and reference, you will see that there's nothing here. If I paste this in - oh, "Paste the contents of the clipboard as rich text?" That's not what I want. That's odd. I guess for some reason, I didn't copy it successfully. Let me go back up here and select all of this, and deselect that. I will copy this and go down to the story and paste. And you can see what it's done. It's pasted in another version. If I go to 3D, we are going to see this whole other story down here. Let's say that I only wanted to see the real building and not this extra copy. I can go to the View menu, Elements in 3D View, Filter and Cut Elements in 3D. [0:20:06]

I can say I only want to see from story 1 to 2; I don't want to see down to the existing one. So I can control this here. By the way, you can also turn off things like objects, morphs or roofs. You can do various things. But let's just focus on the story range. You can see now we are only seeing the new design. Now why would we want to do this vertically? Before ArchiCAD 11, we didn't have the concept of trace and reference. We only had ghost stories. So by putting this on a separate story, we could go and make the new design. [0:20:50]

Let's just say again I am going to drag this over and take these and do a similar change here. Now if I right click on this existing one and show as trace reference - and in ArchiCAD 10 or earlier that would be 'Show Ghost Story' or 'Use as Ghost Story' - now you can see that I can compare the existing and the new. So it was a way to work around or to use ghost stories to be able to compare the original design with the new design. With trace and reference we have other ways that we can compare things, but this certainly still is a valid option in some cases. [0:21:34]

Now one thing that she pointed out is that occasionally, they would go through a whole redesign process and move things around and add rooms and tear down walls and stuff. And at some point, when they are looking at it, they might realize that this wall, say if we drag it, let's say this new wall was very close to the original wall. So they would be looking and say, "Hmm. After we moved it around, we did this and that, we ended up putting it back almost in the exact same place. It's going to cost quite a bit to just gain these few inches that we had here." so they might then choose not to demo the wall and instead live with the existing wall right on top of the original one and not make that change. [0:22:35]

So basically, by being able to compare it intelligently, they could avoid something that otherwise would be unnecessary demolition and construction. So certainly being able to compare these things is important. Let me just back up here. I think that was the main reason that she liked doing it, is that you could in the same file have your existing building and new. You could put views of the dummy stories and negative stories onto the sheets and they were available for reference. You could make certain

things. If you go down a story here, you could select this and perhaps change the floor plan. You can make this a dashed line instead of a solid to indicate that it's being demoed. [0:23:37]

I had uncut lines; we want cut lines. So in ArchiCAD 17, we can't actually change the cut lines here for the wall. I guess because we have our new demolition options that can override things like that, and this is a composite. So we can't do that, but in previous versions, you could switch the wall directly to a dashed line. I guess now, if it's a demo wall, what we would want to do in ArchiCAD 17 if you ever wanted to do this is edit the selected composite here and duplicate it and say "Demo", and then go to the line type and say you want these ones to be dashed. You could also simplify this and say you want to get rid of all of these skins and just have the demo version of this not have all the information. [0:24:56]

So I have just now defined a new one. I didn't change this one, but I could then tell it to use this dashed version. So that would be the way you do it in 17 if you didn't want to use the renovation tagging and filtering options that we will be covering later. Please add your comments and questions to the page down below this recorded video. This has been Eric Bobrow, thanks for watching.

[END OF AUDIO 0:25:23]