Tip Sheet

ArchiCAD 12
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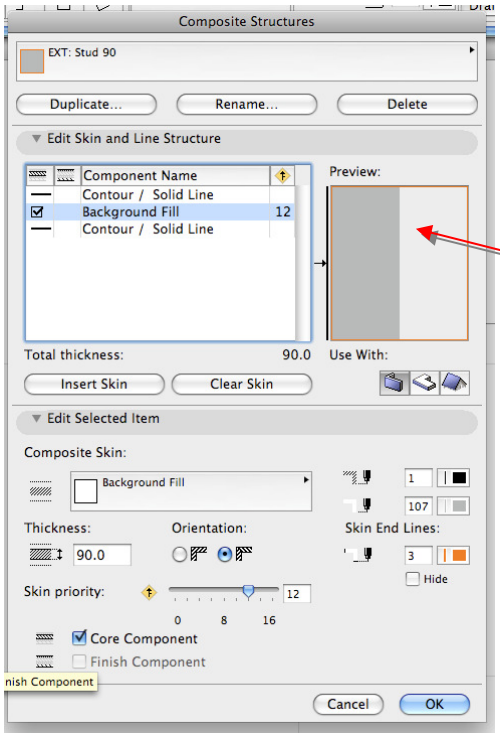
Typical Complex Profile use

While the Complex Profile tool sounds intimidating, using it does not involve a huge learning curve on your behalf. If customizing a standard construction element gets very complicated, or you don't find a specialized construction object in the library, you can place a profiled Wall, Column or Beam, known as a Complex Profile.

Complex Profiles are predefined and custom defined walls, columns and beams that can be edited by hand to take nearly any desired shape.

This tip outlines the procedure for creating a wall and foundation footing using a combination of materials and products.

Getting Started



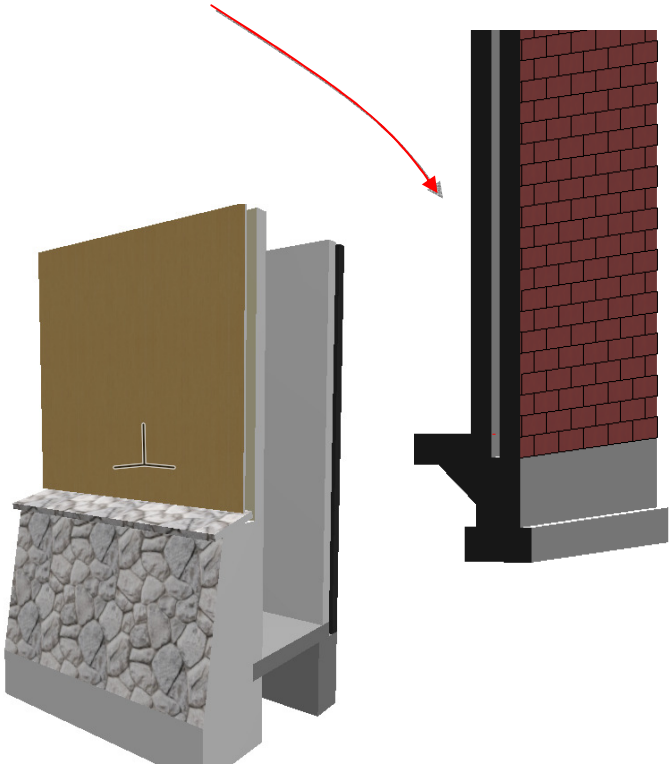
Go **Options>Element Attributes>Composites** and either create or select your standard timber wall ensuring the dimensions and pens etc are to your requirements. This example starts with the standard **EXT: Stud 90** option.

90mm wall

As is shown in the image, the **Cadimage Wall Accessory** tool can be used to effectively negate the need for many composite constructions, the example below shows a simple brick veneer with a 100mm stepdown sitting on a **Cadimage Slab Accessory** foundation profile.

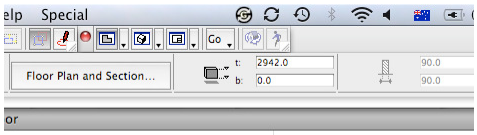
Where we require a more complex combination of materials as seen in the background, a complex profile is the best method to use.

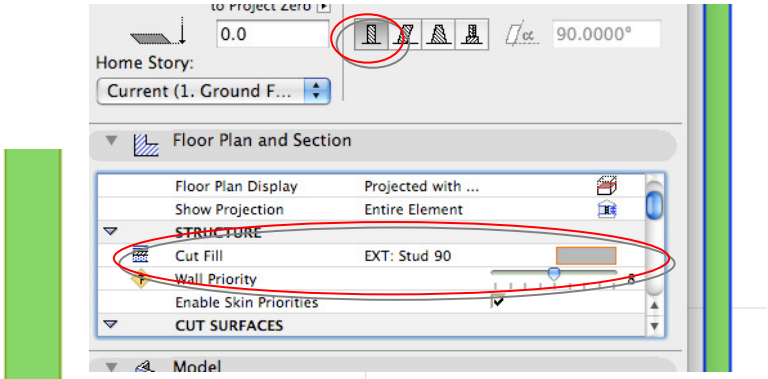
The following example will outline the procedure for creating a wall consisting of timber, concrete and stone masonry with a concrete foundation profile to support it.

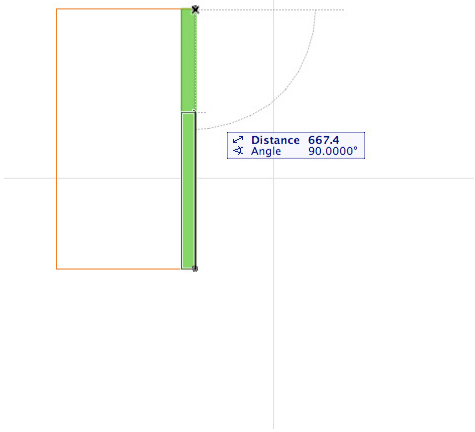


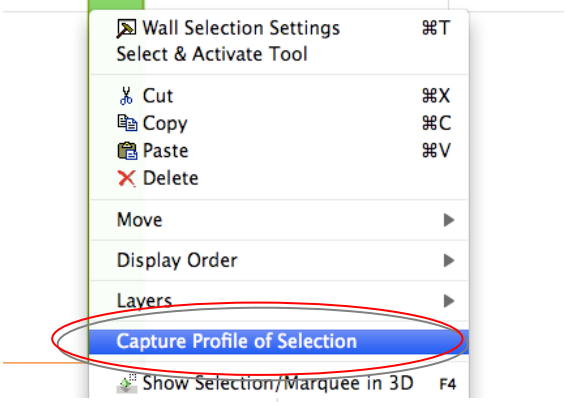
Back on the plan now, place a standard 90mm wall with the reference line on the edge of a slab.

Select the wall and open the **Wall Selection Settings** by either right mouse clicking and selecting from the menu or pressing **⌘/Ctrl + T** on the keyboard – here you can see the wall structure is a straightforward composite.

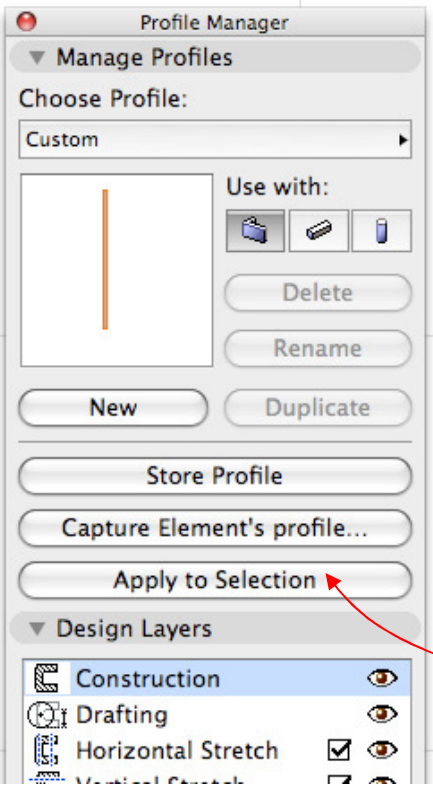


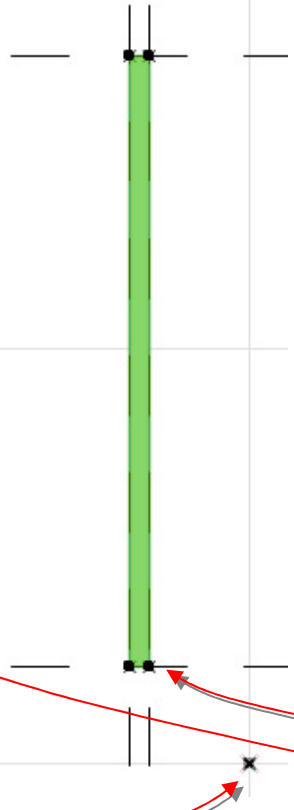


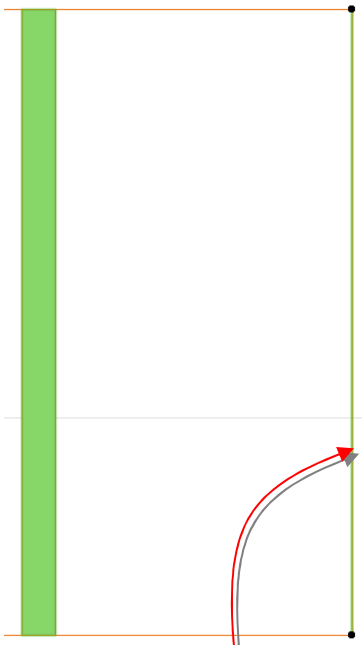




Right mouse click on the wall you have just created and select **Capture Profile of Selection** - this activates the **Complex Profile** tool.





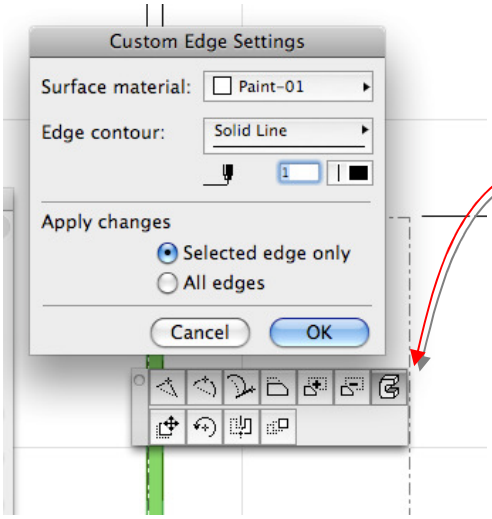


Reference Line

Watch what happens to the wall when its fill profile is moved within the editing window and **Apply to Selection** button is pressed.

Now you will notice that there is an Origin in the editing window. This is effectively the reference line position.

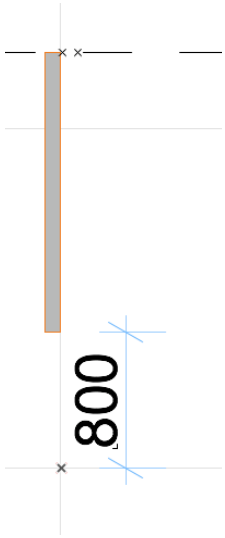
Editing the Profile



In the **Complex Profile** editing window, wall shapes and parts are formed using fills. The cross sectional fill pattern will show in your cross sections and the fill boundary controls the 3D material that is applied to the wall surface. These can be edited manually using this symbol in the pet palette.

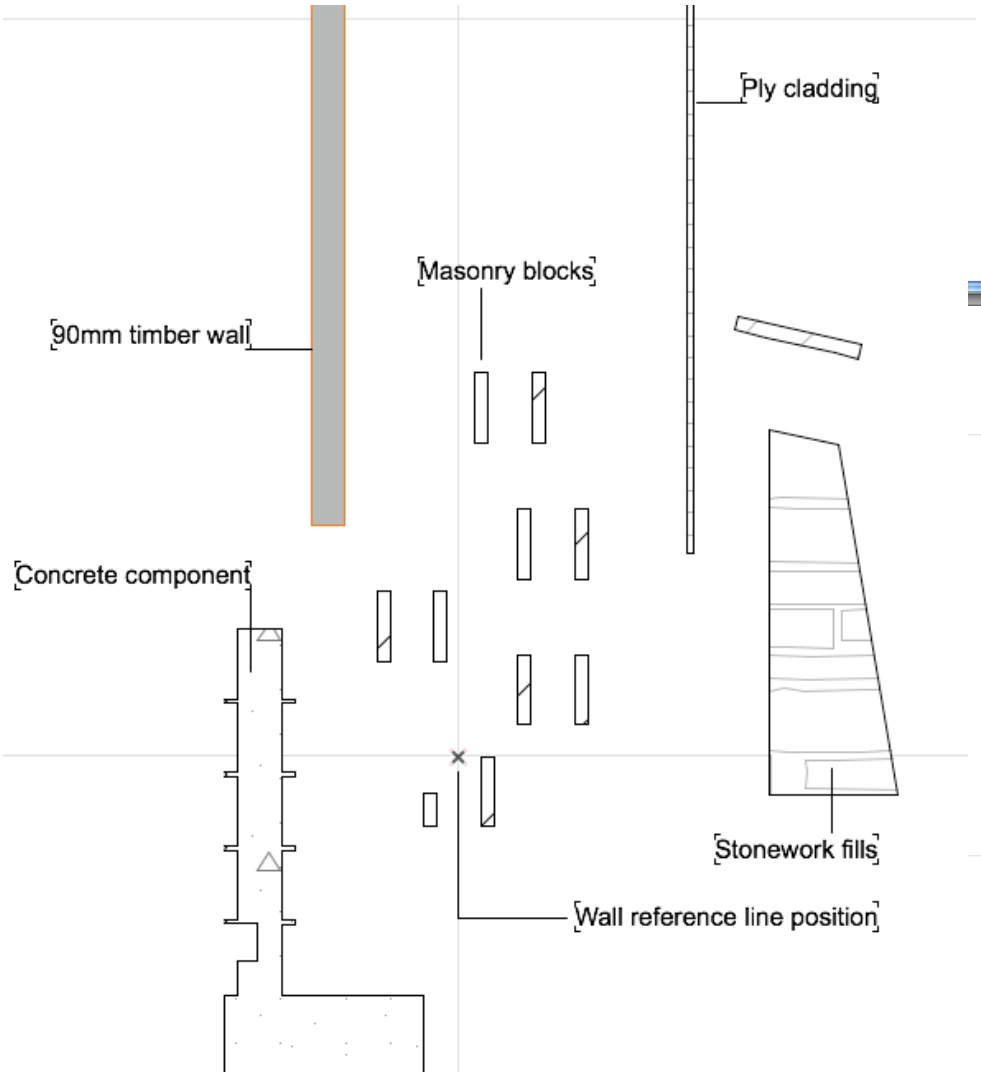
A decision needs to be made about the location of the wall reference line; in this case we have set it to line with the outside face of the timber wall to ensure a simple process of tracing the slab.

Simply offsetting the bottom edge of the existing wall fill up 800mm will create an image like this: note the origin position.

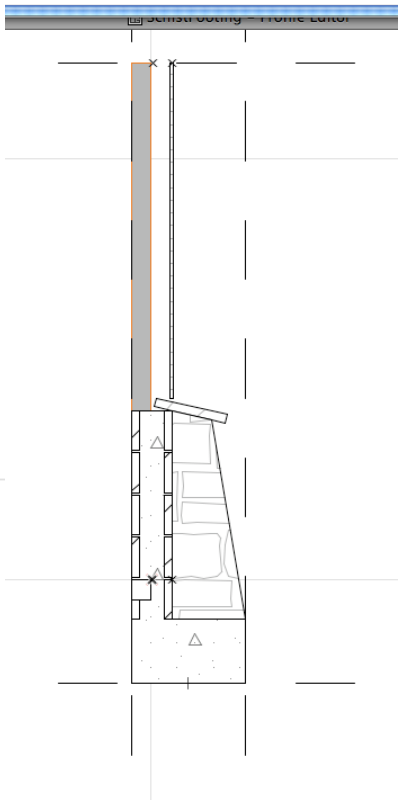


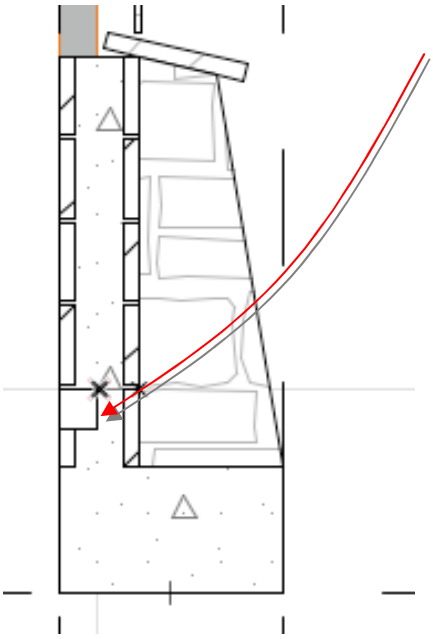
Using the fill tool we can now create a collection of parts that can be assembled to form the finished product. Look at the image below for a better explanation.

One thing to be aware of is that fills cannot be layered. Notice the concrete component below was formed using a non complicated fill shape originally and was reformed once the masonry blocks were drawn over the top. Once the **Store Profile** or **Apply to Selection** button is clicked the fills are flattened to one layer.

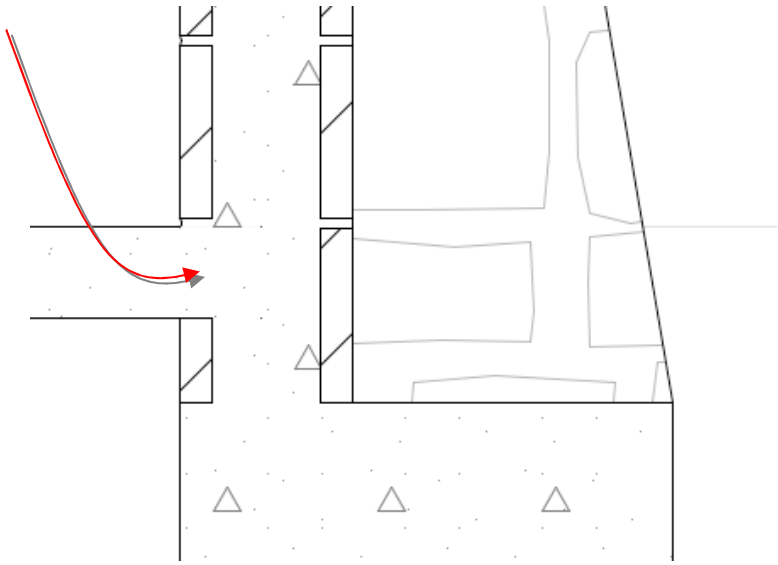


Obviously it makes better sense to create these fills as a whole wall instead of floating in space.

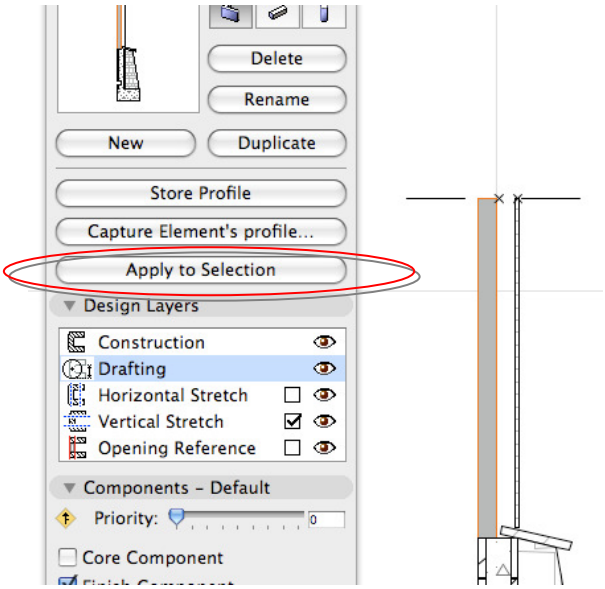


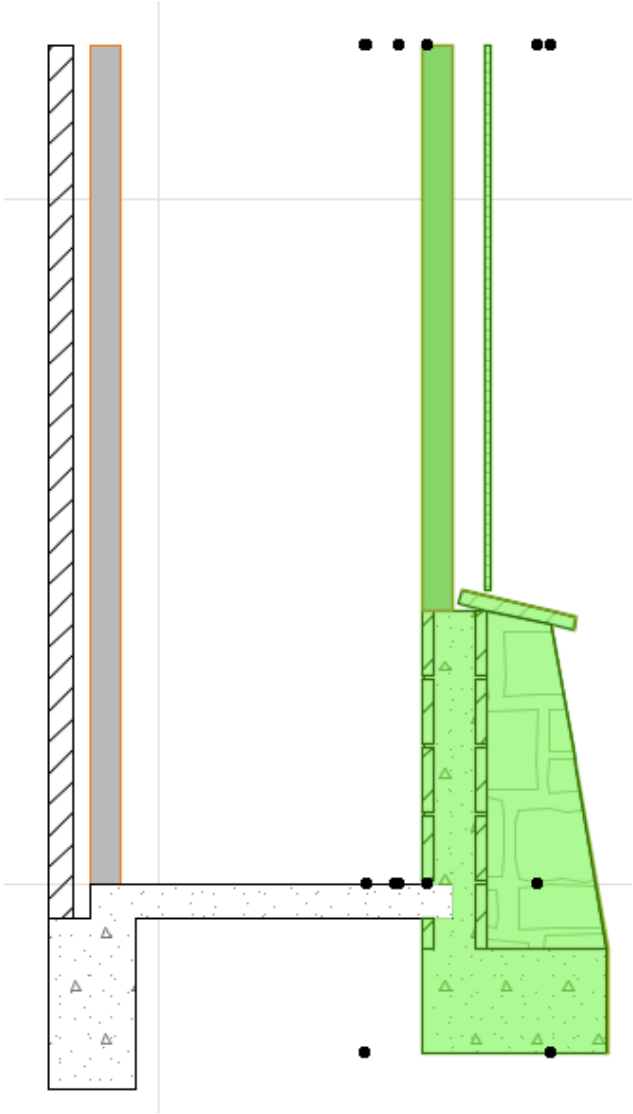


You will notice in this example that a recess in the concrete fill has been formed. This coincides with the reference line position/outside face of the timber wall and is where the slab edge will start when the wall is placed. By setting the profile this way we are guaranteed a clean healing intersection with the slab as long as the cut properties of the slab match.

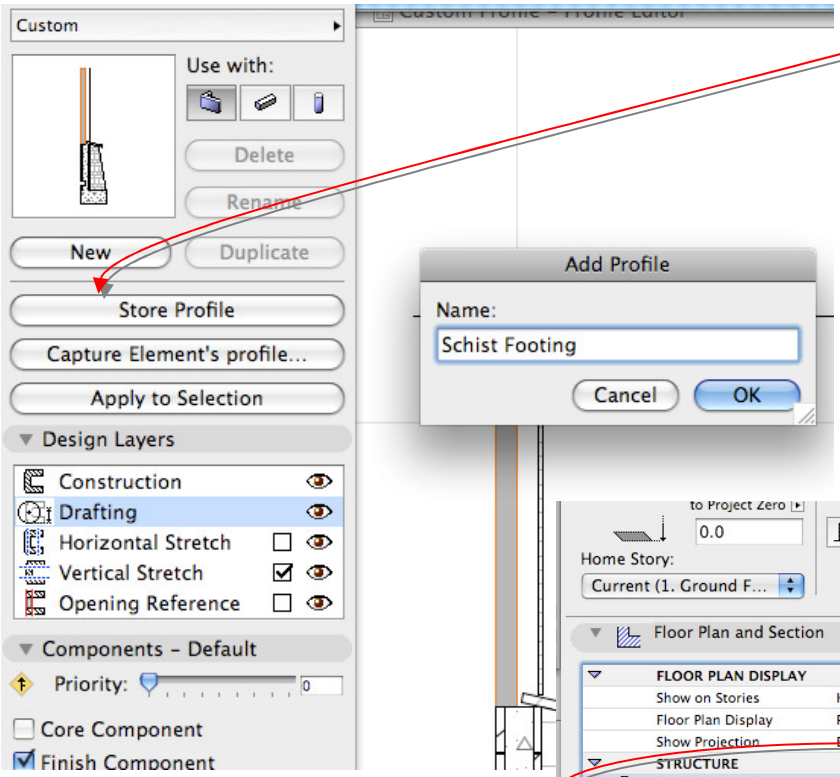


Once you have assembled the fill components of your complex wall click the **Apply to Selection** button and open a cross section through the wall to see what has happened.



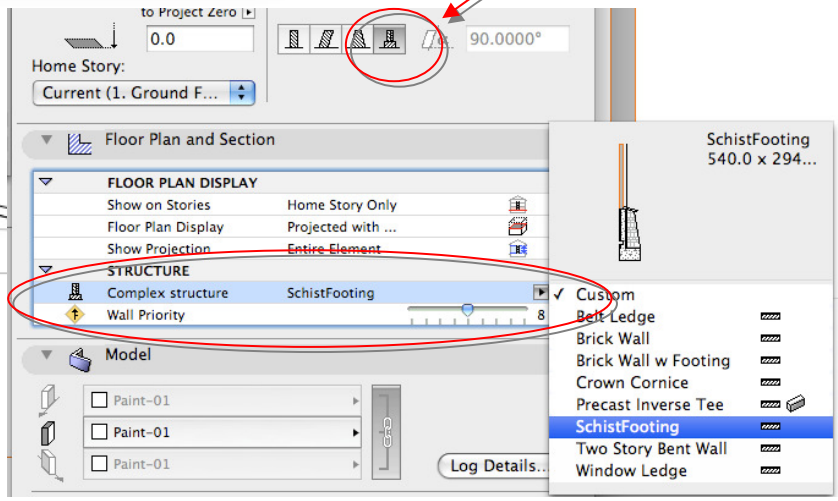
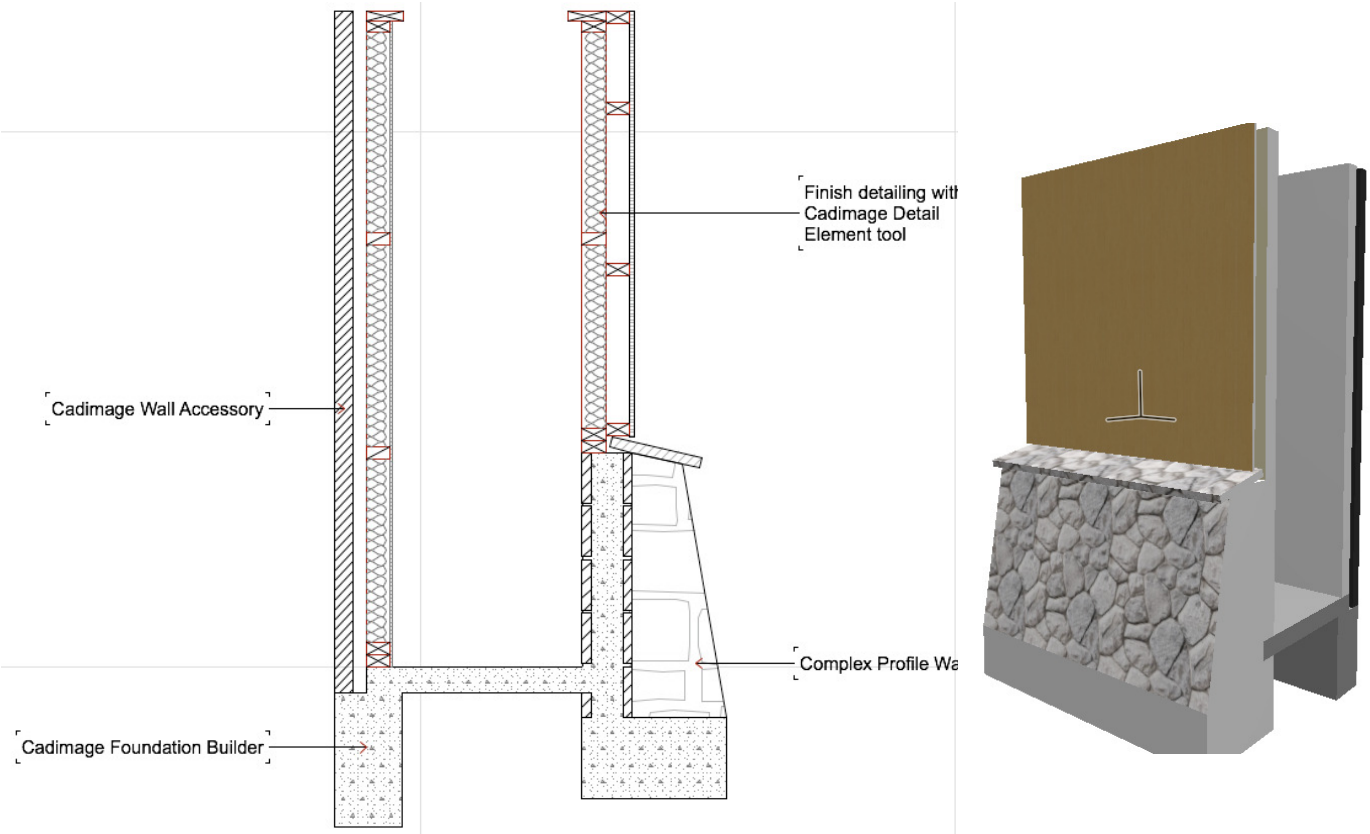


Provided you are happy with the result you can now save the profile. (If you aren't, switch between the **Profile Editor** and cross section window pressing the **Apply to Selection** button each time to update).



Click **Store Profile** and name it something that makes sense. Within the **Wall Default Settings** now you can change the Custom Profile to the newly named one. Now all the relevant walls can be set the same.

Be sure to set the wall shape type to the complex option to save hours of searching.



The finished product can be be quickly and simply dressed up regardless of where a section is cut from.