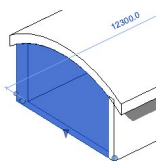


**Please Note:** If you're new to Revit, you may be interested in my "[Beginner's Guide to Revit Architecture](#)" **84 part video tutorial training course**

. The course is 100% free with no catches or exclusions. You don't even need to sign-up. Just enjoy the course and drop me line if you found it useful. The [full course itinerary can be viewed here](#)

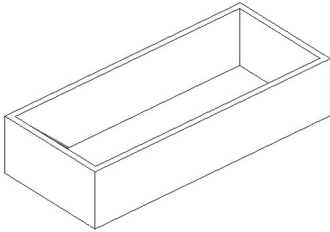
Most people's first experience of Roofs within Revit Architecture is by means of the "Roof by Footprint" tool. This is absolutely the right tool for the job when you need to create either a flat roof or a pitched roof. But what about if you want to create a curved roof. Well, fear not: Revit has just the tool for the job; and it the "**Roof by Extrusion**" tool.

In this short tutorial we are going to use this tool to create a curved, barrel vault roof over a simple rectangular building.



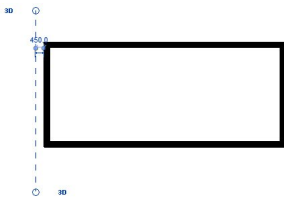
So first of all let's create a building for the roof to sit on! We are going to keep the form of the building really simple- we are interested in the fundamental concepts and not architectural merit.

Here is our building in all it's glory.....



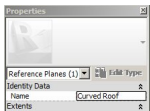
Within Revit, the "Roof by Extrusion" tool is used in an Elevation or Section View- as opposed to the "Roof by Footprint" tool, which is used in a Plan View. We also need to use a Reference Plane upon which we can sketch the "side profile" for our extrusion.

So first of all let's go ahead and create our Reference Plane. We can sketch this in a Plan View....



In the image above you will see our newly-created Reference Plane, offset 450mm away from one of the short edges of the building. PLEASE get into the habit of "naming" all Reference Planes that you create. So before we go any further, I am going to name this new Reference Plane "Curved Roof".....

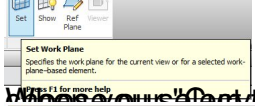
# Roofs: Roof by Extrusion



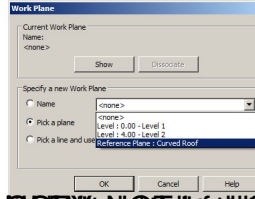
Using the 'Reference Plane' (No Draft) button in the 'Reference Plane' dialog box to



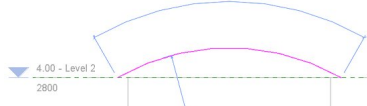
This is a reference plane for the 'Set Work Plane' dialog box to



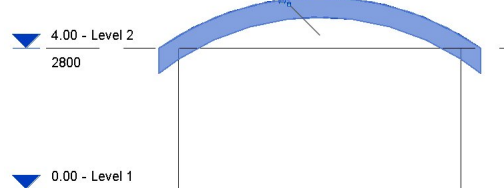
This Roof Reference Plane is set with the 'Work Plane' dialog panel. Simply



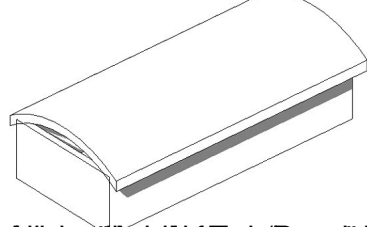
Clicking the 'OK' button in the 'Work Plane' dialog box to



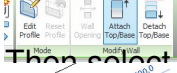
Clicking the 'OK' button in the 'Work Plane' dialog box to



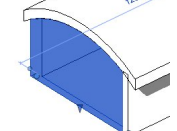
Let's switch to a 3D View and get a better idea of our new roof....



Clicking the 'Attach Roof/Base' button in the 'Attach Roof/Base' dialog box to



Then select the roof element. Your end wall will now be joined to the underside of the curve....



Now just repeat for the other end of the roof that's it job done! You can experiment with all sorts