

Revit Architecture 2016 – Disabled Access

Revit Architecture 2016: Create a Step to Building Entrance

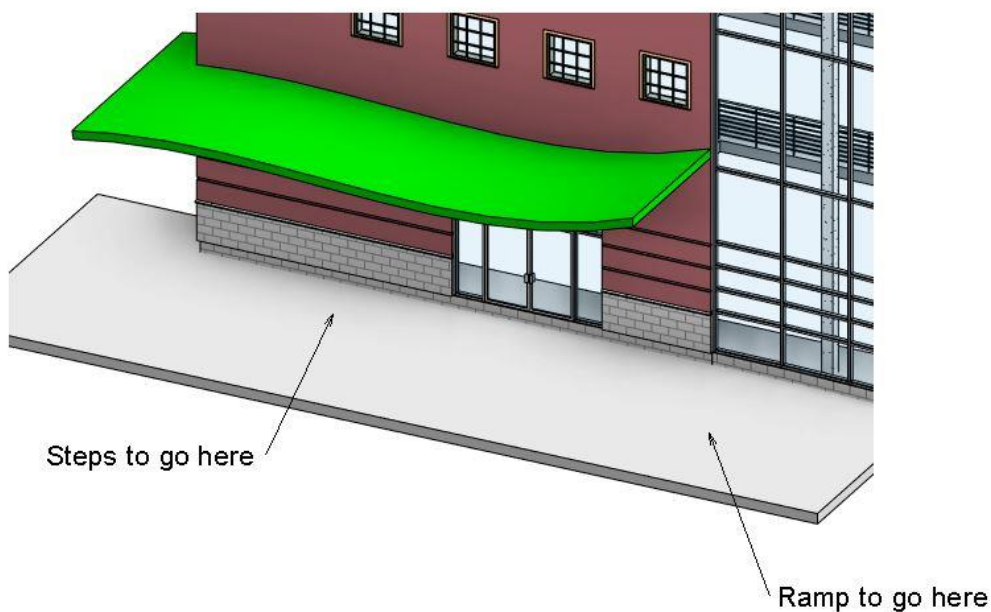
This White Paper shows how to create a custom entrance stair.

Task 1 – Create a custom entrance stair.

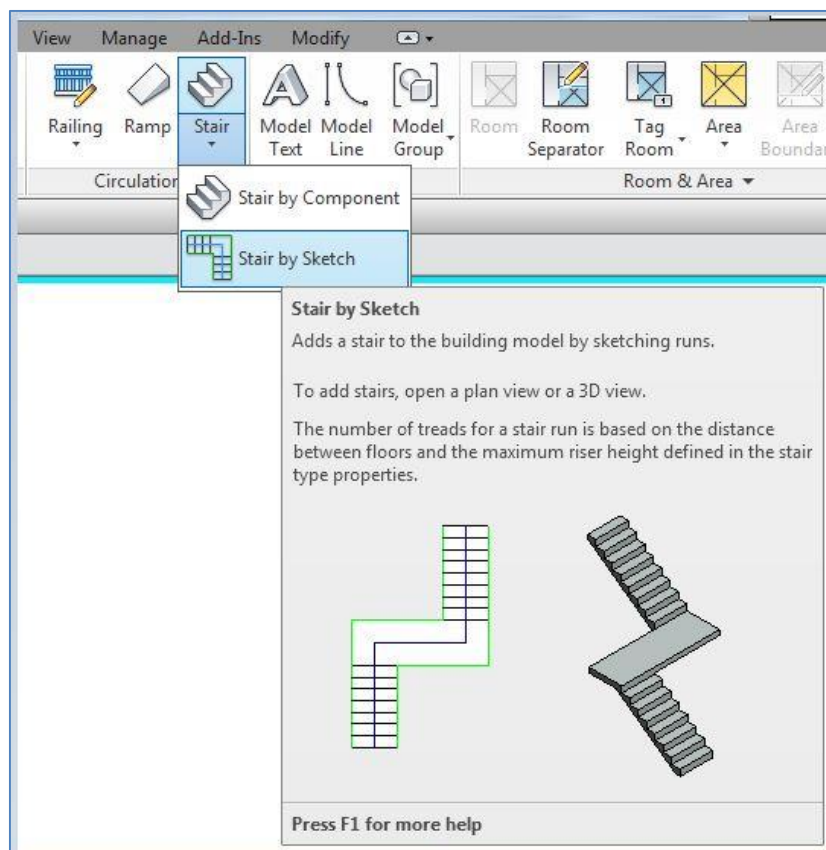
The illustration below shows the front entrance to a hotel (source: ASCENT – Autodesk Fundamentals 2016).

Fig 1: Hotel Entrance

DISABLED ACCESS - BUILDING ENTRANCE



First we will create the entrance steps using the stair by sketch tool. Go to the circulation panel on the Ribbon and select Stair by Sketch.

Fig 2: Stair by Sketch Location

In the Type Selector, choose your stair type. In this example the Monolithic stair type has been selected.

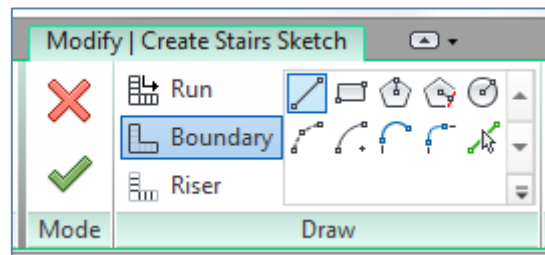
In Properties, set the *Base Level* to **Floor 1**, with a *Base Offset* of (negative) -300mm, and set the *Top Level* to **Floor 1**, with a *Top Offset* of 0.0.

In Properties set the *Underlay* to **Floor 2**. This displays the outline of the entrance roof that can be used to create the custom stairs.

In the *Modify / Create Stairs Sketch* tab>Tools panel, click Railing. In the Railing dialogue box, select **None** and click **OK**.

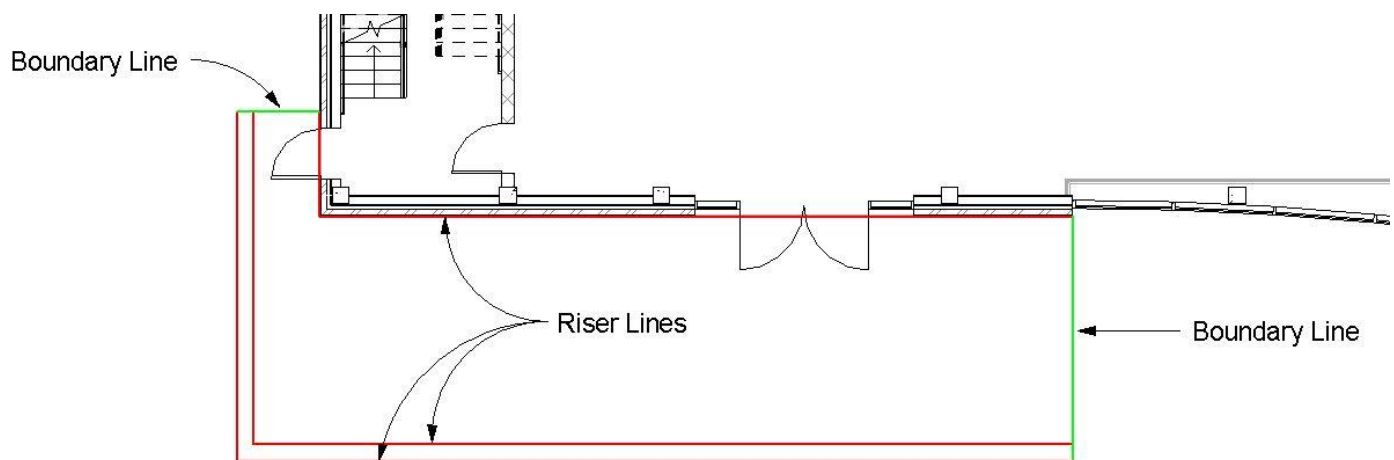
When you select the Stair by Sketch tool, some options will appear on the contextual Ribbon Panel (*highlighted in Green*).

Fig 3: Riser and Boundary Line Tools



Sketch the Riser and Boundary Lines in plan view as illustrated in Fig 4. Use the Trim/Extend to Corner Tool to tidy up intersections.

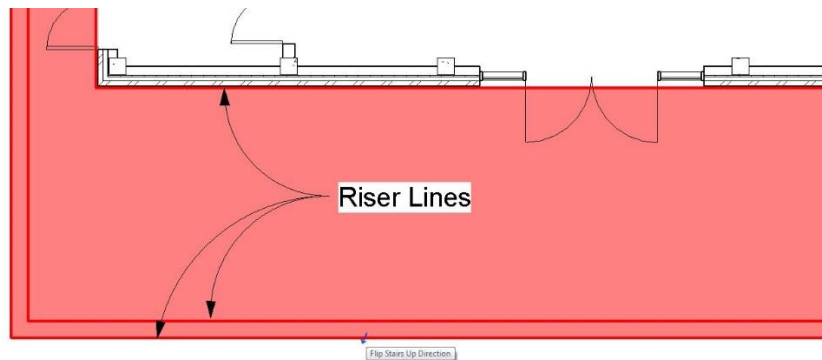
Fig 4: Riser and Boundary Lines (*shown in colour for clarity*).



Click  (Finish Edit Mode) to complete the stair.

Lastly, check that the stairs are in the right direction. If the arrow is not pointing in the same direction as that shown in fig 5, click the Flip Stairs Up Direction control, which might be located near the main door.

Fig 5: Flip Stairs



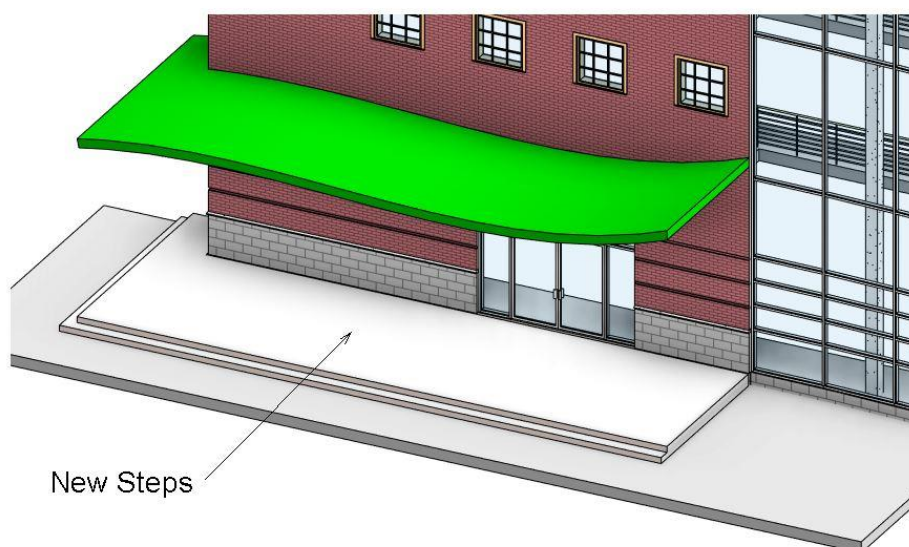
With the stair still selected, clear the **DN** annotation in Properties.

Set the *Underlay* back to **None**.

View the new stairs in 3D (*Fig 6*).

Fig 6: Custom Entrance Stair Complete

Custom Entrance Stair



In this example the custom stairs were created on Level 1 with the Underlay for Level 2 above turned on in Properties. The outline of the custom stairs (Risers & Boundaries) was created by picking the outline of the Level 2 entrance canopy (Pick Lines tool instead of the default lines tool).

You do not necessarily need an underlay, you can sketch the lines and position them using temporary or permanent dimensions. The level constraints and offsets will vary from project to project depending on the sill height of entrance doors etc. The fact that you can use the stair by sketch tool in such a way to create a flat surface up to door entrance level is one way of approaching the task of assisting disabled access to buildings. If a ramp abutted the right side of our new entrance steps then people in wheelchairs could enter the building. I will outline the steps to create the ramp in my next White Paper.

Date: January 2016

