

## Test Case 20 – Extended Slab

Test Description: The slab on grade sometime extends to the exterior to form a patio. This design challenges the BIM software to correctly identify the portion of slab on grade that forms the boundary of space.

Spaces / Rooms:

There is one space in this test model. It is named as “Level\_1\_Space\_1”.

Special Consideration:

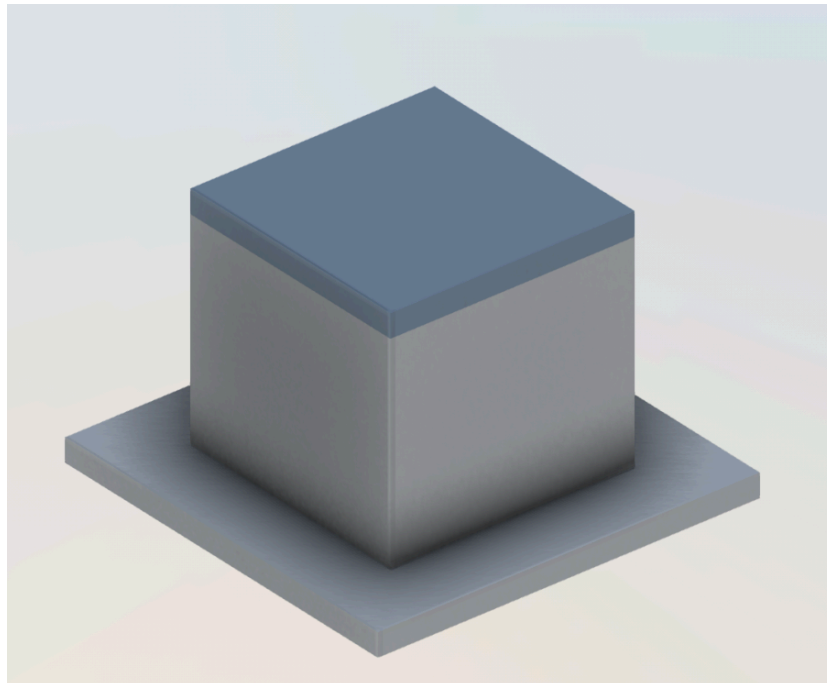
1. The model is 10’ height and 10’ wide.
2. The wall thickness is 8”
3. The both thicknesses of roof and slab on grade are 1’.

Description of Test Model:

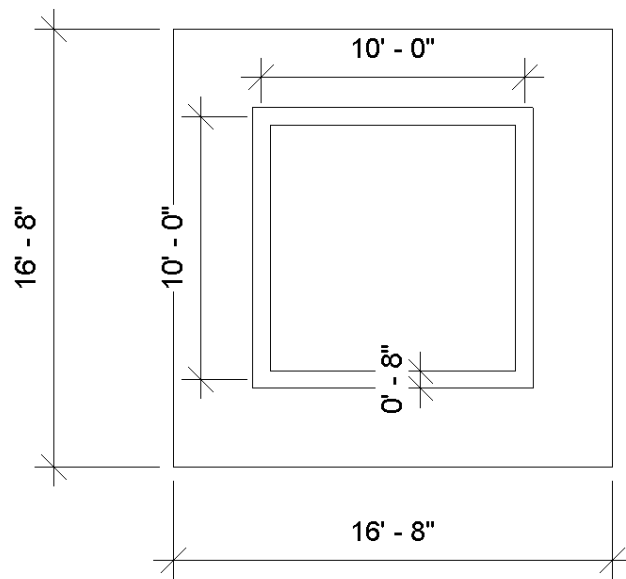
[Figure 1](#) shows a 3-dimensional isometric view of this test model.

[Figure 2](#) shows a typical floor plan to indicate dimensions and directions of the space, with wall thickness and the curve space dimensions.

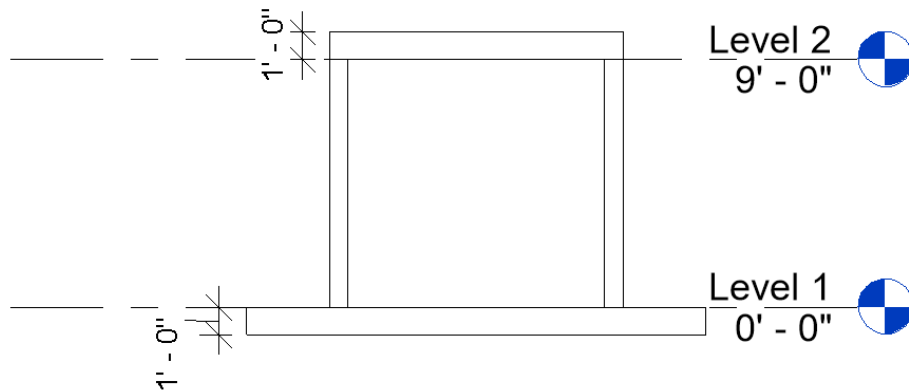
[Figure 3](#) shows the elevation view to indicate positions and dimensions of the slab floor, roof or ceiling elements.



**Figure 1.** Isometric View



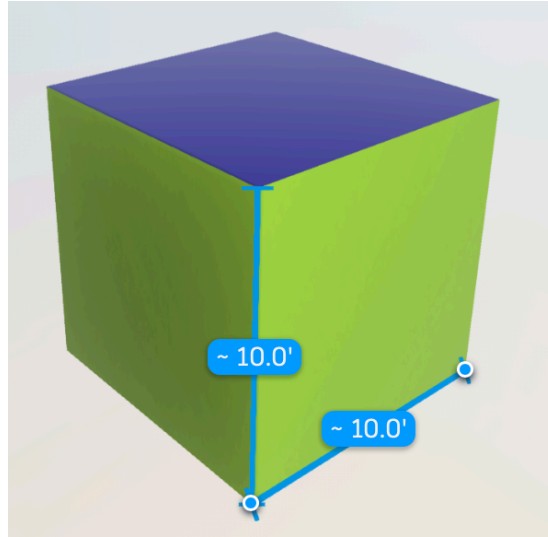
**Figure 2.** Floor Plan



**Figure 3.** Elevation

**Expected Outcome:**

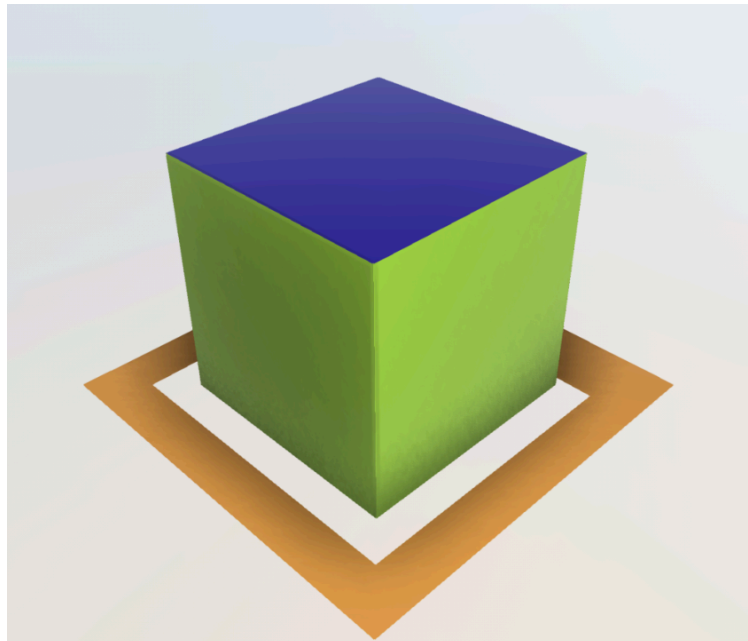
The exported gbXML should have a height of 10' and width of 10'. No shade surfaces generated and the bottom surface should be corrected identified as slab on grade surface type.



**Figure 4.** Exported gbXML model

*Common Outcomes and Test Results:*

It is common to find that the patio section is exported as redundant ground attached shading surfaces. These surfaces have no use in the simulation model and their existence increase model's geometric complexity.



**Figure 5.** gbXML model with shade surfaces