

Getting Started With Autodesk Revit

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Getting Started Guide

Thank you for choosing the Autodesk® Revit® parametric building modeller. We hope you enjoy both learning and using our revolutionary product and believe you will find Autodesk Revit fast, fun, and easy to use. We have worked hard to make Autodesk Revit respond to your thought processes and work methodology, rather than require you to conform to strict guidelines. Autodesk Revit will extend your creative abilities.

The exercises in this guide get you up and running and creating great designs better and faster than ever before.

Getting Started

Before beginning the exercises, you need to install and register the software: registration options are demo or subscription. All you need is the Autodesk Revit CD and an Internet connection.

Demo mode serves as a no-cost viewer, allowing you to export, print, or plot projects that have not been edited.

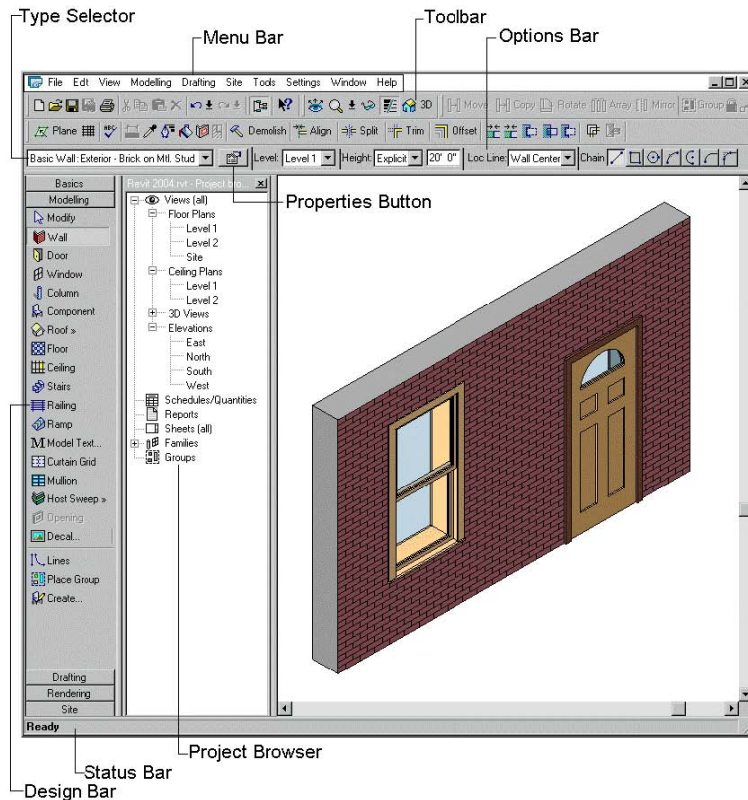
Imperial and Metric Convention

The exercises in this guide contain both imperial and metric values. This means that when you see an imperial value, the corresponding metric value is displayed in square brackets ([]) next to it. For example: Enter 5" [10 mm] for the dimension. All audiences using imperial measurements should use the imperial values only. All audiences using the metric measurements should follow the metric values in brackets only.

In addition, there are notes that are marked for imperial or metric audiences only. Be sure to read the notes that are marked for your use.

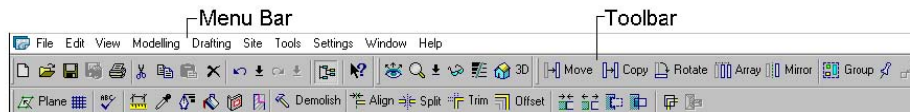
Exploring the User Interface

When the Autodesk Revit window is displayed, take a minute to view the different sections.



Menu Bar and Toolbar

At the top of the screen is the standard Microsoft Windows[®]-based menu bar. You can access each of the Autodesk Revit menus by clicking the menu name. Another area of interest is the Toolbar. The Toolbar contains buttons with icons representing some of the common Autodesk Revit commands.



Options Bar

Below the Toolbar is the Options Bar. The Options Bar displays different command options that complement the current operation. Click Wall on the left side of the Autodesk Revit window. Notice the different commands on the Options Bar that are related to the Wall command.



Type Selector

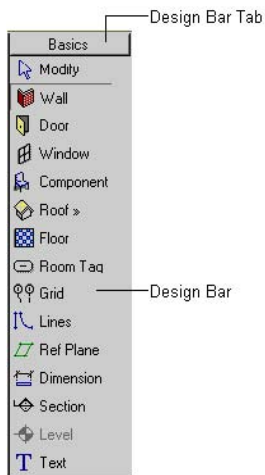
On the left side of the Options Bar is the Type Selector. The Type Selector lists different types of families to add to a project. You can choose other wall types by selecting them from the drop-down menu of the Type Selector.

Properties Button

To the right of the Type Selector, is the Properties button . Use this button to change the different property values of your components.

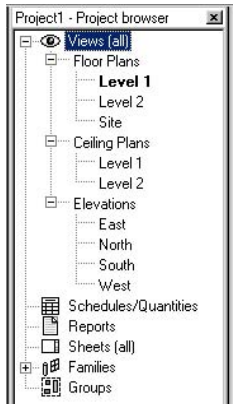
Design Bar

On the left side of the Autodesk Revit window are additional commands. This area of the interface is the Design Bar. There are ten tabs in the Design Bar: Basics, Modelling, Drafting, Rendering, Site, Massing, Area Analysis, Structural, View, and Construction. Each tab consists of different commands organized by the title of the tab. To display a tab, click the tab name.



Project Browser

To the right of the Design Bar is the Project Browser. The Project Browser is a listing of all the views, families, and groups in the project. You can select any of the items listed in the Project Browser. A convenient way to open the views is to double-click the view names in the Project Browser list.



Status Bar

On the lower left corner of the interface is the Status Bar. This displays the status of the current command or the name of a highlighted element.

Starting Your Project

Now that you have explored the interface, you can start your first project. The project that you create is the house shown in the following figure. In this project you use some of the basic commands found in Autodesk Revit. The intention of the exercises is for you to see firsthand how easy it is to design a simple building with no previous experience.



The project file for these exercises are in a specially prepared dataset that includes a site plan and the families that you need to complete the project.

Adding Walls

First, you create the exterior walls by placing them on the building pad that displays in the floor plan view when you open the working file.

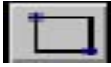
Project Working File

- On the File menu, click Open.
 - In the left pane of the Open dialog box, click the Training Files icon.
 - Open the *GSGexercisefile_M.rvt* from the *Metric* subfolder.
1. On the Basics tab of the Design Bar, click Wall.

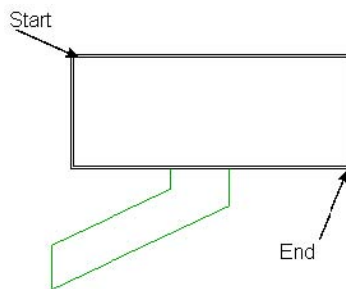


2. On the Options Bar, select Level 2 for Height.
3. On the Options Bar, select Finish Face: Exterior for Loc Line.

This option places the walls on the building pad by their exterior faces. Later when you change the wall type, the walls stay located by their exterior faces.



4. Click
5. To draw the walls, snap the cursor to the endpoint at the top left corner of the pad. You have located the endpoint when a square and a tooltip display.
6. Move the cursor from the top left corner to the lower right corner across the rectangular part of the building pad.
7. Click the endpoint at the lower right corner of the pad to complete the walls.



Again, a square and a tooltip display when the cursor snaps to the endpoint.

8. On the File menu, click Save As, enter a name for the project, and click Save.

NOTE If you are using Autodesk Revit in Demo mode, you cannot save, and you may skip this step.

9. Leave the project open in its current view, and proceed to the next exercise, [“Changing Wall Types”](#)

Changing Wall Types

The walls you just placed are not the type of walls you are going to use for the house. You are going to change them to a different type of exterior wall.

1. On the Basics tab of the Design Bar, click Modify.
2. Place the cursor on one of the walls, so that the wall highlights.

Notice the Status Bar. It indicates what you are highlighting in this format: Category : Family : Type. So now you are highlighting Walls : Basic Wall : Generic Basic Wall.

You are going to select all the walls simultaneously. Selecting a continuous series of elements is known as Chain Selection in Autodesk Revit.

3. Press TAB.

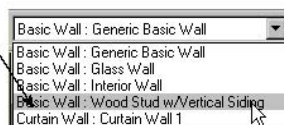
Notice that all the walls highlight. Also notice the Status Bar indicates Chain of Walls.

4. Click to select the walls.

All the walls are now selected and are displayed in red.

5. In the Type Selector, click Basic Wall: Wood Stud w/Vertical Siding.

Type Selector Choice



The walls change to the new type.

6. If running with a subscription, press CTRL+S to save the file.
7. Leave the project open in its current view, and proceed to the next exercise, [“Adding Building Datums”](#)

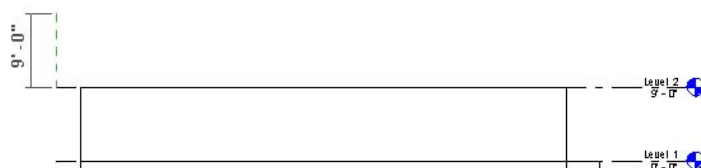
Adding Building Datums

In this part of the exercise, you create a new level for the roof and a level for the parapet above the roof.

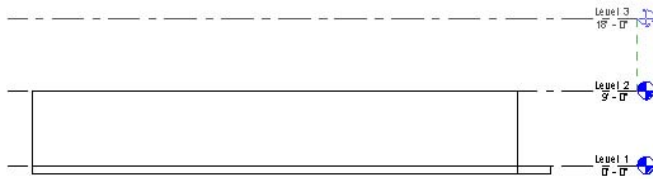
1. In the Project Browser, expand Views (all), expand Elevations, and double-click North Elevation.

The North Elevation view opens. Notice in the elevation view you can see the walls in elevation and the first two level lines.

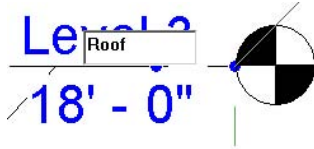
2. On the Basics tab of the Design Bar, click Level.
3. Click 9 feet [2750 mm] above Level 2 to start the level.



4. Move the cursor horizontally and click again to end the level.



5. To rename the level, click the level name and enter Roof.



6. When prompted to rename the corresponding levels, click Yes.
7. Add a level 18 inches [500 mm] above the roof level.
8. Rename the level to Parapet and click Yes to rename corresponding views.

The four exterior walls now need to go up to the parapet level. You are going to tile the views so you can instantly see the change in elevation instantly.

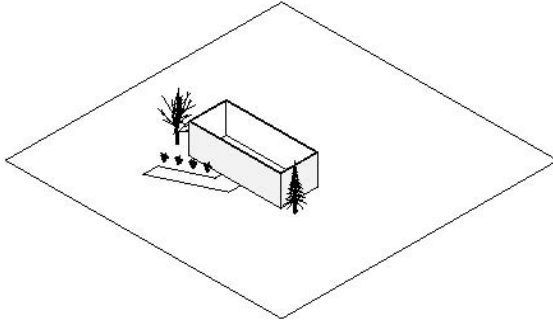
9. On the Window menu, click Tile.
10. On the View menu, click Zoom ➤ Zoom All to Fit.
11. On the Design Bar, click Modify and place the cursor in the Floor Plan: Level 1 view.
12. Chain select the four walls: highlight one wall and press TAB to highlight all walls. Click to select them.
13. Right-click in the drawing area and click Properties.
14. In the Element Properties dialog box, select Up to level: Parapet for Top Constraint.
15. Click OK. The walls now extend and are constrained to the parapet level.
16. If running with a subscription, press CTRL+S to save the file.
17. Leave the project open in its current view, and proceed to the next exercise, ["Creating a 3D View"](#).

Creating a 3D View

In this part of the exercise, you create a 3D view of the building information model.

1. Close the Elevation: North window, maximize Level 1, and press ZA to zoom all.

2. On the View toolbar, click  to create a new 3D view.



3. Reorient the building model:

- On the View toolbar, click .
- Press and hold SHIFT, and spin the building model by dragging one of the corners in any direction.
- To finish spinning the building model, press ESC.

4. In the Project Browser under 3D Views, double-click {3D}.

5. To give the view a unique name, right-click 3D and click Rename.

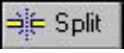
6. Enter the name and press OK.

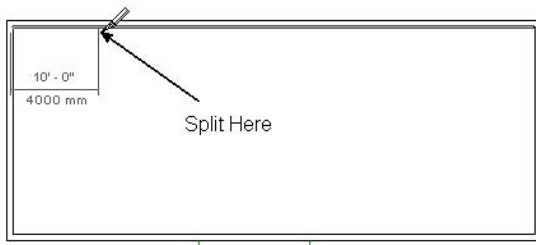
7. If running with a subscription, press CTRL+S to save the file.

8. Leave the project open in its current view, and proceed to the next exercise, [“Modifying the Shell”](#)

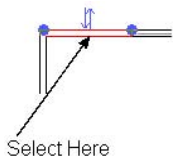
Modifying the Shell

In this part of the exercise, you are going to split a wall and vary its height. You attach the wall to a cantilevered space you create later.

1. In the Project Browser under Floor Plans, double-click Level 1.
2. Right-click in the drawing area and click Zoom to Fit.
3. On the Tools toolbar, click  Split
4. Place the cursor on the north wall, 10 feet [4000 mm] away from the west wall as shown.



5. Click to split the wall.
6. On the Design Bar, click Modify and select the left portion of the wall.

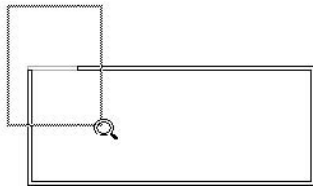


7. Right-click and click Properties.
8. In the Element Properties dialog box, select Up to level: Level 2 for Top Constraint, and click OK.
9. In the Project Browser, open the 3D view to see the results.
10. If running with a subscription, press CTRL+S to save the file.
11. Leave the project open in its current view, and proceed to the next exercise, [“Adding New Walls”](#).

Adding New Walls

In this part of the exercise, you extend new walls away from the main part of the house to form the cantilevered space.

1. In the Project Browser under Floor Plans, double-click Level 2.
2. On the Basics tab of the Design Bar, click Wall.
3. In the Type Selector, click Basic Wall : Wood Stud w/Vertical Siding.
4. On the Options Bar, specify three options:
 - Select Parapet for Height.
 - Select Wall Centerline for Loc Line.
 - Select Chain and click 
5. Right-click in the drawing area and click Zoom in Region.
The cursor changes to a magnifying glass. Drag it across the building model as shown.



6. To sketch the first cantelivered wall, make sure the cursor snaps to the endpoint along the centerline of the vertical wall.

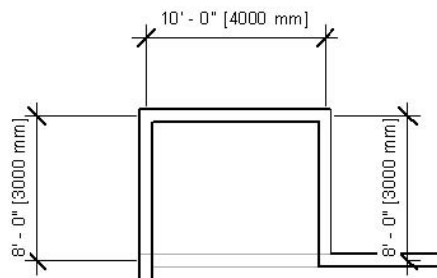
Watch the Status Bar as you place the cursor. Do not place the cursor so that it snaps at the intersection of the walls. An intersection is indicated by an X.

7. Sketch three walls:

Watch the temporary dimensions that display.

Sketch the vertical walls 8 feet [3000 mm] from the house.

Sketch the horizontal wall 10 feet [4000 mm].



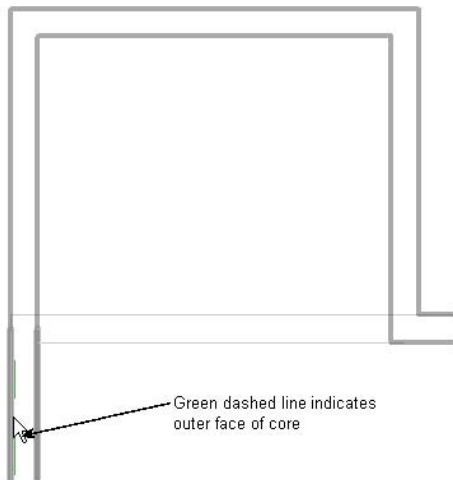
NOTE Press ESC after you place the third wall to end the chain creation of walls.

8. On the Design Bar, click Modify and select all three new walls by dragging the cursor right-to-left over the walls.
9. Right-click and click Properties.
10. Enter -1' [-300 mm] for the Base Offset property and click OK. This lowers the base of the wall to the bottom of the floor.
11. If running with a subscription, press CTRL+S to save the file.
12. Leave the project open in its current view, and proceed to the next exercise, [“Creating a Floor”](#).

Creating a Floor

Now you create a floor on Level 2.

1. If necessary, zoom the view so you can see the entire building model clearly.
2. On the Basics tab of the Design Bar, click Floor.
You see the Sketch Design Bar display. By default, Pick Walls is selected; using Pick Walls, you create the floor sketch by selecting the walls of the building.
3. As shown in the next figure, place the cursor near the outer face of a wall so that it snaps to the outer face of the core.



4. Press TAB and click to chain select the walls.



5. On the Design Bar, click Finish Sketch.
6. Click Yes when the following message is displayed:

Would you like walls that go up to this floor's level to attach to its bottom?

7. Click Yes when the following message is displayed:

The floor/roof overlaps the highlighted wall(s). Would you like to join geometry and cut the overlapping volume out of the wall(s)?

8. If running with a subscription, press CTRL+S to save the file.
9. Leave the project open in its current view, and proceed to the next exercise, [“Adding a Roof”](#).

Adding a Roof

Now you add a roof to the top of the house.

1. In the Project Browser under Floor Plans, double-click Roof.
2. If necessary, zoom the view so you can see the entire building model clearly.
3. On the Basics tab of the Design Bar, click Roof ► Roof by Footprint.
4. On the Options Bar, select Extend to wall core.

You create the roof the same way you created the floor.

5. With the Pick Walls command selected, place the cursor near the outer face of a wall so that it snaps to the outer face of the core.
6. Press TAB and click to chain select the walls.

The roof sketch displays with the walls highlighted.

7. Click Finish Roof.
8. Click Yes when the following message is displayed:

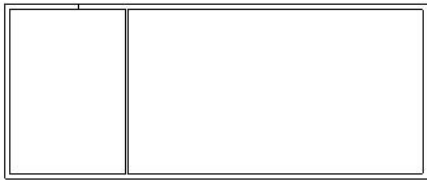
The floor/roof overlaps the highlighted wall(s). Would you like to join geometry and cut the overlapping volume out of the wall(s)?

9. Open the 3D view to see the results.
10. If running with a subscription, press CTRL+S to save the file.
11. Leave the project open in its current view, and proceed to the next exercise, [“Adding Interior Features”](#).

Adding Interior Features

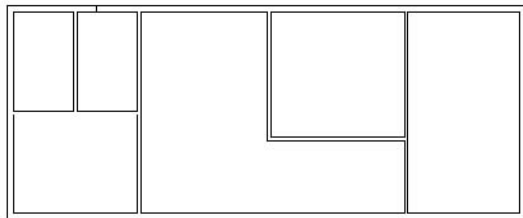
Now you add some interior features to the floor plan layout.

1. In the Project Browser under Floor Plans, double-click Level 1.
2. On the Basics tab of the Design Bar, click Wall.
3. In the Type Selector, click Basic Wall : Interior Wall.
4. Clear Chain and select .
5. Place the first interior wall approximately where shown.



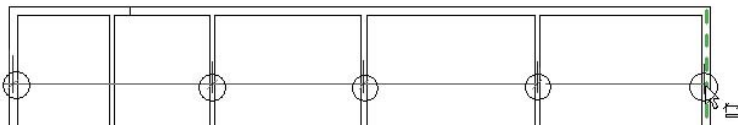
6. Place the remaining interior walls approximately where shown.

Do not be concerned with exact placement at this time. You will use dimensions to space these walls at equal distances from each other.

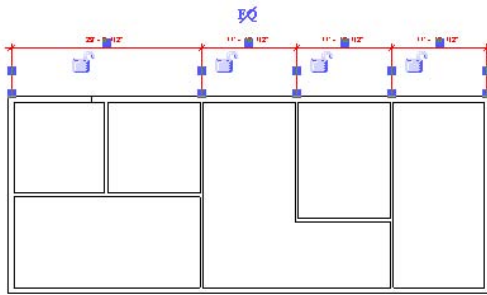


7. On the Basics tab of the Design Bar, click Dimension.
8. Accept the default settings on the Options Bar and place the cursor on the west wall. Click that wall to place a reference.
9. Click the walls shown to place references for the dimension.

Do not click the second wall from the left. Notice that as you move the cursor on the walls, the centerline of the wall highlights.

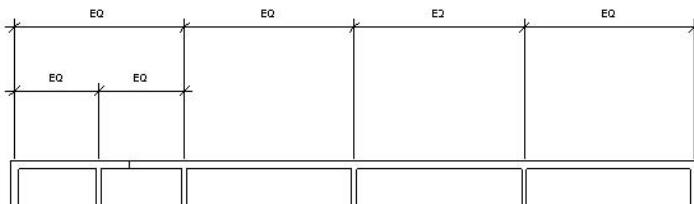


10. To finish the dimension, move the cursor up from the north wall and click onto white space in the view.

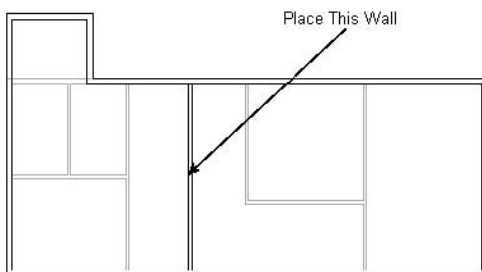


Now you are going to specify that all segments are equally spaced from one another.

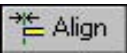
11. Click the EQ symbol (displays with a slash through it) that displays above the dimension to place all segments at an equal distance from one another.
12. Place another dimension where shown and click the EQ symbol to specify that all segments are at equal distances.



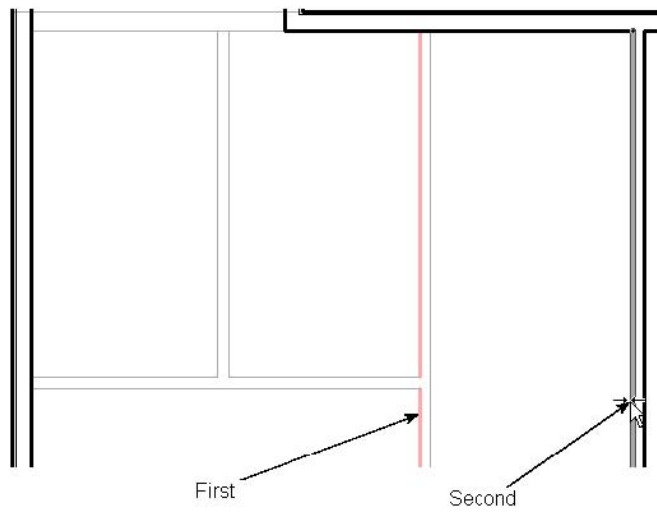
13. In the Project Browser under Floor Plans, double-click Level 2.
14. On the Design Bar, select wall.
15. On the Options Bar, clear Chain and add an interior wall as shown.



Now you are going to align a face of this wall with a face of a wall from Level 1.

16. On the Tools toolbar, click  Align
17. On the Options Bar, select Prefer wall faces.

18. Click the walls as shown.



19. Click the blue padlock that displays to lock the alignment.

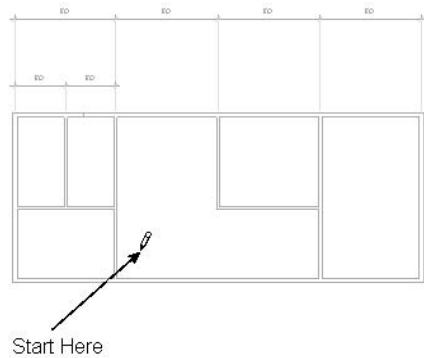
20. If running with a subscription, press CTRL+S to save the file.

21. Leave the project open in its current view, and proceed to the next exercise, [“Adding Stairs”](#).

Adding Stairs

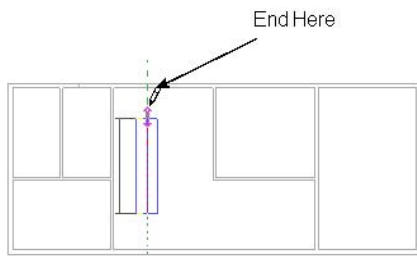
Now you are going to add a run of stairs along one of the new interior walls.

1. In the Project Browser under Floor Plans, double-click Level 1.
2. On the Modelling tab of the Design Bar, click Stairs.
3. On the Design Bar, verify that Run is selected.
4. Place the cursor approximately where shown and click to start the stair run.



NOTE Do not place the cursor so close to the wall that it snaps to the wall.

5. Move the cursor straight up and click to end the run of stairs where shown.

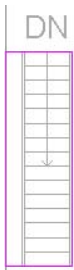


6. On the Design Bar, click Finish Sketch.

Now you need to cut an opening in the floor on Level 2 so the stairs go up to the second level.

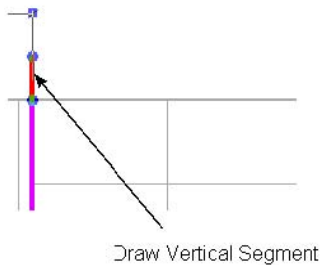
7. In the Project Browser under Floor Plans, double-click Level 2.
8. Place the cursor on the west wall and press TAB until you highlight the floor. Watch the Status Bar to be sure you are highlighting the floor.
9. On the Options Bar, click  Edit
10. On the Design Bar, click Lines.
11. On the Options Bar, click 
12. Zoom in on the stairs.

13. Sketch a rectangle aligned with the face of the wall to the left of the stairs, as shown. Include the run of stairs. Watch for snap points as guides to complete the rectangle.



14. On the Design Bar, click Finish Sketch.
15. When you see the prompt, click Yes. Now you are going to modify the railings of the stairs so that they cover the opening in the floor.
16. Select the left railing of the stairs.
17. On the Options Bar, click .
18. On the Design Bar, click Lines and select Chain.

As shown in the next figure, you are going to add a vertical segment to the railing.



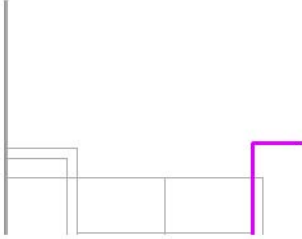
19. Continue the railing as shown.



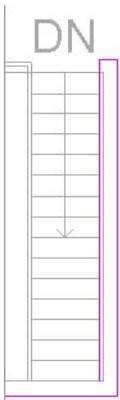
20. On the Design Bar, click Finish Sketch.
21. Select the right railing of the stairs.

22. On the Options Bar, click 

Modify the right railing the same way you modified the left railing.

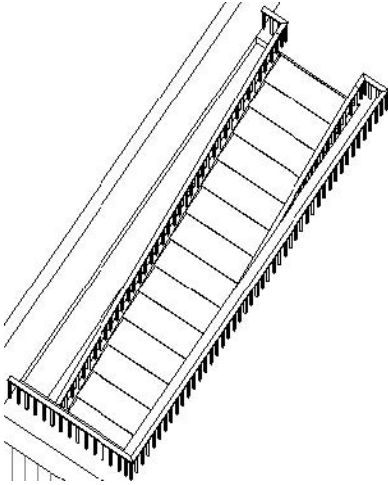


23. Continue the railing as shown.



24. On the Design Bar, click Finish Sketch.
25. Open the 3D view. You are going to temporarily hide the roof in the view so you can see the new railings.
26. On the Toolbar, click 
27. Select the roof in the view and click Hide in the Temporary Hide/Isolate dialog box.

28. Spin the building model to see the railings clearly.



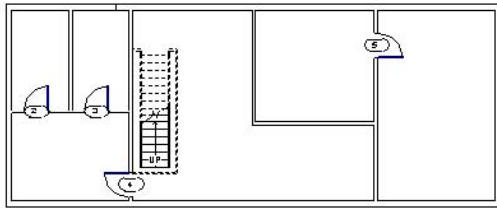
29. When finished, click Reset in the Temporary Hide/Isolate dialog box.
30. Click  to end the command.
31. If running with a subscription, press CTRL+S to save the file.
32. Leave the project open in its current view, and proceed to the next exercise, [“Adding Doors”](#).

Adding Doors

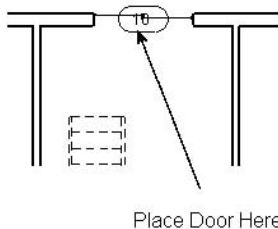
You now insert doors into your building model.

1. In the Project Browser under Floor Plans, double-click Level 1.
2. If necessary, zoom the view so you can see the entire building model clearly.
3. On the Modelling tab of the Design Bar, click Door.
4. In the Type Selector, click Single-Flush 36" X 80" [Single-Panel : 900 X 2100mm].
5. Place doors in the walls approximately where shown.

If you want to change the swing of the doors, click the double-arrow control that displays when you place a door.

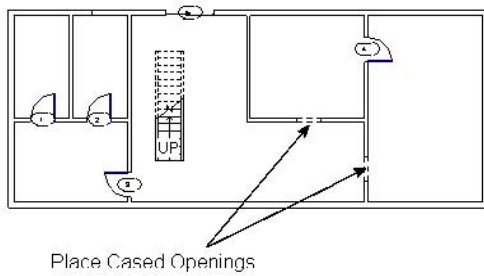


6. In the Type Selector, click Sliding-2 panel : 72" X 84" [Sliding_Panel : 1800 X 2100 mm].
7. Place the sliding door in the north wall above the stairs.

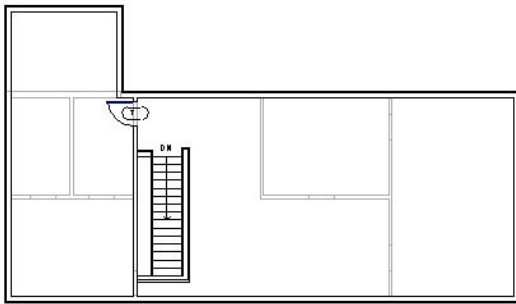


8. On the Basics tab of the Design Bar, click Component.
9. In the Type Selector, click Opening-Cased : 36" X 80" [Cased-Opening : 900 X 2100 mm].

10. Place the cased openings in the view where shown.



11. In the Project Browser under Floor Plans, double-click Level 2.
12. Click Door and in the Type Selector click Single-Flush 36" X 80" [Single-Panel : 900 X 2100 mm].
13. Place a door where shown.

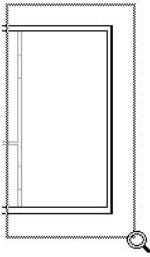


14. If running with a subscription, press CTRL+S to save the file.
15. Leave the project open in its current view, and proceed to the next exercise, ["Adding Exterior Features"](#).

Adding Exterior Features

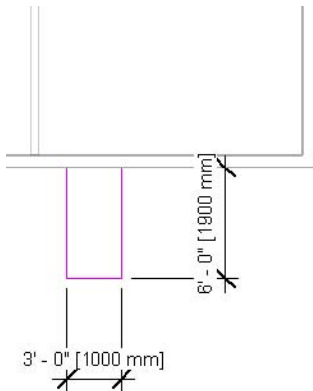
In this section, you add an exterior landing to Level 2 and create a circular staircase from Level 1 to Level 2.

1. In the Project Browser under Floor Plans, double-click Level 2.
2. Zoom in on the lower right corner as shown.



3. On the Basics tab of the Design Bar, click Floor.
4. On the Sketch tab of the Design Bar, click Lines.
5. On the Options Bar, click  and sketch a floor 3 feet [1000 mm] by 6 feet [1900 mm] on the outside of the building as shown.

Sketch the floor on the face of the wall and to the right of the interior wall above it.



6. On the Design Bar, click Floor Properties.
7. In the Element Properties dialog box, select Landing for Type.
8. Click OK.
9. On the Design Bar, click Finish Sketch.

Now you add the circular stairs that attach to the landing.

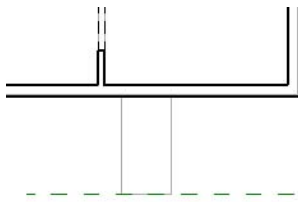
10. In the Project Browser under Floors Plans, double-click Level 1.
11. Right-click in the drawing area and click View Properties.

12. In the Element Properties dialog box, select Level 2 for Underlay and click OK.

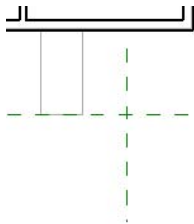
This helps you place the stairs by using the landing as a reference.

13. Zoom in around the landing underlay in this view.
14. On the Basics tab of the Design Bar, click Ref Plane.
15. Sketch a reference plane along the horizontal line of the landing as shown.

NOTE Place the cursor on the landing so that it snaps to it. Draw the reference plane horizontally in one direction. Resize the reference plane by dragging the control that is displayed as a blue circle.

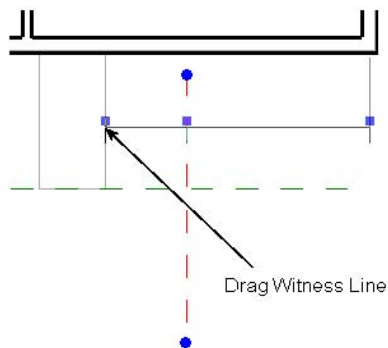


16. Sketch a vertical reference plane as shown.



Notice the witness line of the temporary dimension that displays when you place the vertical reference plane. The witness line references the centerline of the interior wall above the landing. You want to move this reference to the right edge of the landing to locate the reference plane precisely.

17. With the temporary dimensions still active, place the cursor on the left witness line control (blue square) and drag it to the right vertical line of the landing as shown.



18. Click the temporary dimension value on the left and change it to 18 inches [500 mm].

19. On the Modelling tab of the Design Bar, click Stairs.

20. On the Sketch tab of the Design Bar, click Stairs Properties.

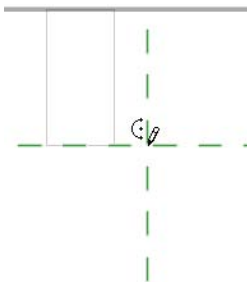
21. In the Element Properties dialog box, select Circular Stairs for Type.

22. Click OK.

23. On the Options Bar, click .

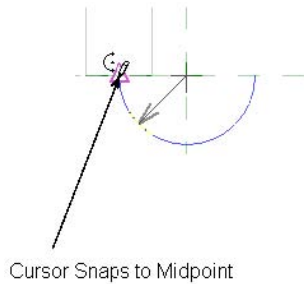
24. Click at the intersection of the two reference planes as shown to place the center of the arc.

Watch for the tooltip in the view so you know you are at the intersection.



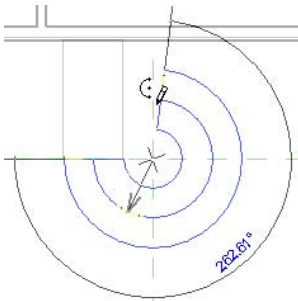
25. Move the cursor to the center of the landing as shown, so that it snaps to the midpoint.

You have the midpoint when a triangle is displayed.



26. Click to place the arc endpoint.

27. Move the cursor in a circular motion to the right until you see a circular shape for the stairs as shown.



28. Click to place the arc.

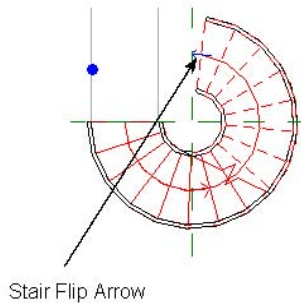
29. On the Design Bar, click Finish Sketch.

Normally, when you create stairs, your first pick is the bottom of the stairs, and the next pick is the top of the stairs. Your circular stairs were actually created in reverse, so you need to flip their direction.

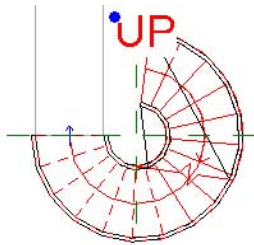
30. On the Design Bar, click Modify and select the stairs.

31. Click the blue flip arrow that appears on the run.

TIP The blue flip arrow is displayed at the right end of the spiral.



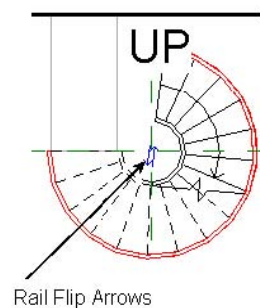
The stairs should now appear as shown. Note that the direction control UP has changed position.



Next, you need to flip the railings to sit to the inside of the treads since this stair type does not have stringers.

32. Press TAB to highlight one of the railings and click to select it.

33. Click the blue flip arrows to flip the railing.



34. Select the other railing and click the flip arrows.

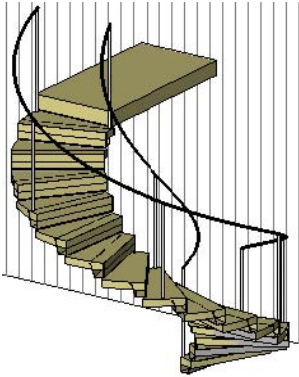
35. Select both railings by clicking one, pressing and holding CTRL, and clicking the other.

36. In the Type Selector, click Railing : Landing Railing.

37. Open the 3D view to see the results.

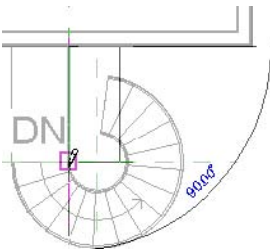
38. On the View menu, choose Shading with Edges.

To finish the stairs, you are going to create railings on the landing that attach to railings on the stairs.



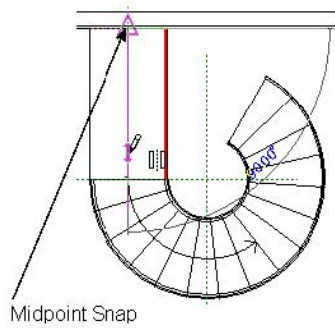
- 39. In the Project Browser under Floor Plans, double-click Level 2.
- 40. On the Modelling tab of the Design Bar, click Railing.
- 41. On the Sketch tab of the Design Bar, click Railing Properties.
- 42. In the Element Properties dialog box, click Landing Railing for Type.
- 43. Click OK.
- 44. Sketch a railing line by starting from the top of the landing (closest to the house) and moving toward the end of the landing (away from the house).

Watch for the endpoint snaps (magenta squares) that appear when you sketch.

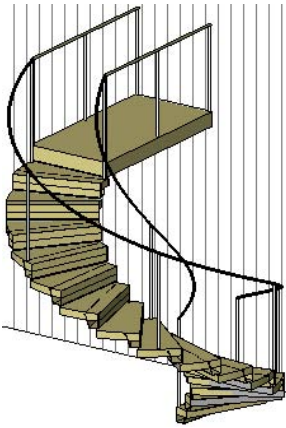


- 45. On the Design Bar, click Finish Sketch. Now you are going to make a copy of this railing for the other side.
- 46. Select the new railing. You may need to press TAB to highlight it.
- 47. On the Toolbar, click Mirror.
- 48. On the Options Bar, click  and verify that Copy is selected.
- 49. Select the midpoint of the landing along the exterior wall.

50. Sketch an axis line about which to mirror the railing by dragging the cursor towards the stairs and specifying a point.



51. Open the 3D view to see the results.



52. If running with a subscription, press CTRL+S to save the file.

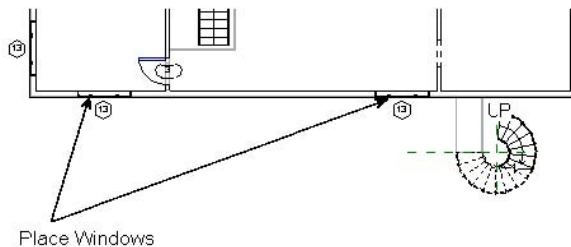
53. Leave the project open in its current view, and proceed to the next exercise, [“Adding Windows”](#).

Adding Windows

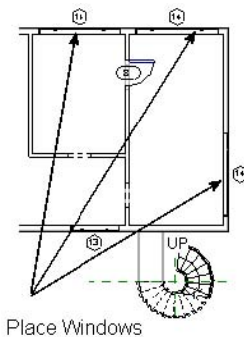
You are going to add windows to levels 1 and 2.

1. In the Project Browser under Floor Plans, double-click Level 1.
2. Zoom the view so you can see the entire building model.
3. On the Modelling tab of the Design Bar, click Window.
4. In the Type Selector, click Picture-Side Casements : 72" X 48" [Picture-Side Casements : 1850 X 1200].
5. Place the windows approximately as shown.

NOTE Move the cursor to the outside face of the walls before placing the windows, so that the tags are on the exterior side of the windows.

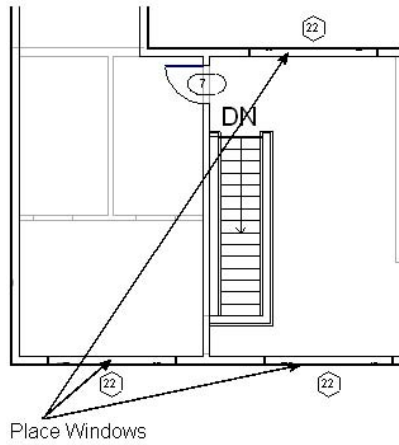


6. In the Type Selector, click Picture-Side Casements 120" X 48" [Picture-Side Casements 3050 X 1200].
7. Place the windows approximately as shown.

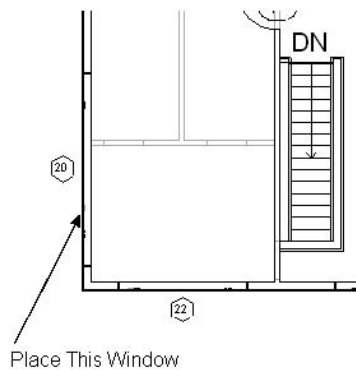


8. In the Project Browser under Floor Plans, double-click Level 2.
9. Zoom the view if necessary to see the entire building model clearly.

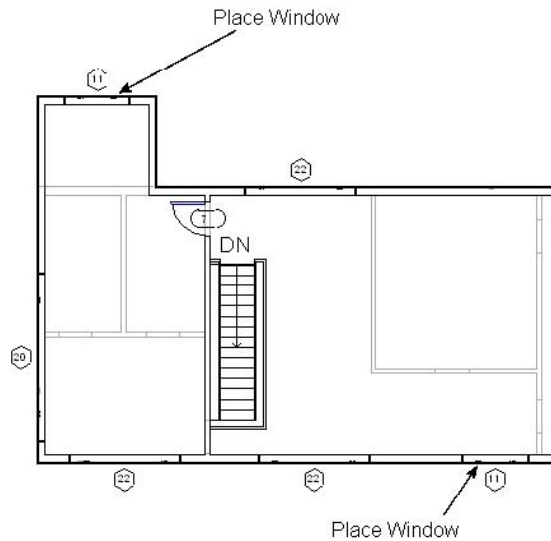
10. On the Basics tab of the Design Bar, click Window and place Picture-Side Casements 120" X 36" [Picture-Side Casements 3050 X 900 mm] windows where shown.



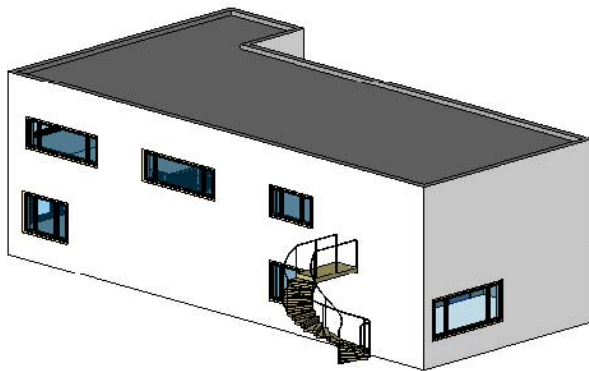
11. In the Type Selector, click Picture-Side Casements 180" X 36" [Picture-Side Casements 4500 X 900 mm] and place a window where shown.



12. In the Type Selector, click Picture-Side Casements 72" X 36" [Picture-Side Casements 1800 X 900] and place two windows in this view as shown.



13. Open the 3D view to see the new windows.



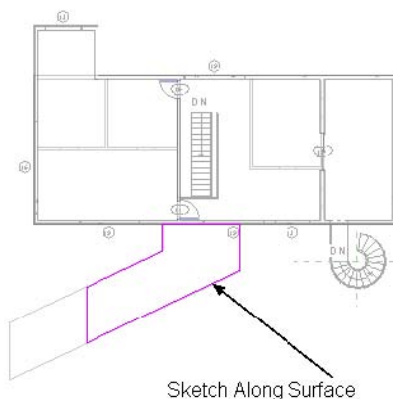
14. If running with a subscription, press CTRL+S to save the file.
15. Leave the project open in its current view, and proceed to the next exercise, ["Adding an Entrance"](#).

Adding an Entrance

You are going to add a flat roof over the walkway of the entrance. You also create a glass block wall that attaches to the house.

1. In the Project Browser under Floor Plans, double-click Level 2.
2. On the Modelling tab of the Design Bar, click Roof ➤ Roof by Footprint.
3. On the Sketch Tab of the Design Bar, click Roof Properties.
4. In the Element Properties dialog box, click Walkway Roof for Type.
5. Click OK.
6. On the Design Bar, click Lines.
7. On the Options Bar, clear Defines slope.
8. Select Chain and click .
9. Sketch a roof along the outline of the walkway on the site plan.

The long edge of the roof should be at least 28 feet [8500 mm]. Make sure the chain ends at the start point to form a closed loop.



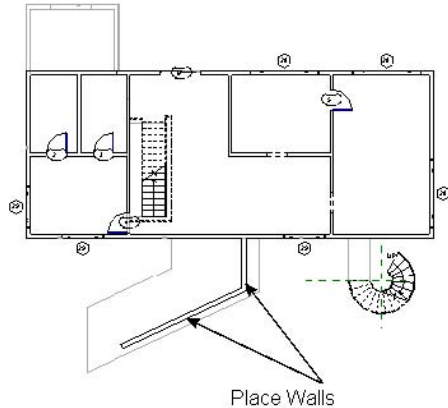
10. On the Design Bar, click Finish Roof.
11. In the Project Browser under Floor Plans, double-click Level 1.
12. On the Basics tab of the Design Bar, click Wall.
13. In the Type Selector, click Basic Wall : Glass Wall.
14. Select Parapet for Height.

You want the height of the walls to be higher than the roof, because later on you use a tool to attach the walls to the roof.

15. Select Chain and click .

16. Place the two glass walls as shown in the next figure.

The first wall segment should be 7 feet [2400 mm] long, and the second wall segment should be 20 feet [6000 mm] long.



17. Press ESC to complete placing the walls.

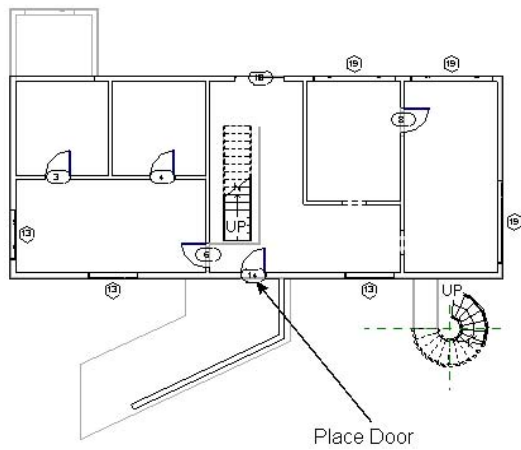
Now you need to attach the walls to the roof entrance.

18. Open the 3D view.
19. If necessary, rotate and zoom the building model so you can see the roof and the glass walls clearly.
20. On the Design Bar, click Modify and select the two glass walls.
21. On the Options Bar, click Attach for Top/Bottom.
22. Select the walkway roof.

The walls attach to the roof.

23. In the Project Browser under Floor Plans, double-click Level 1.
24. On the File menu, click Load From Library ➤ Load Family to add a new door style to your project.
25. Navigate to the *Doors* folder in either the *Imperial* or *Metric Library*, select *Single-Glass 1.rfa* [*M_Single-Glass 1.rfa*], and click Open to load it into the project.
26. On the Basics tab of the Design Bar, click Door.

27. Place the door in the view as shown.



28. Open the 3D view.

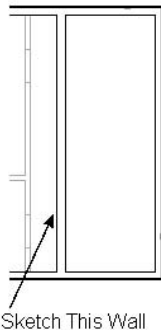
29. If running with a subscription, press CTRL+S to save the file.

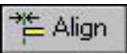
30. Leave the project open in its current view, and proceed to the next exercise, [“Creating the Deck”](#).

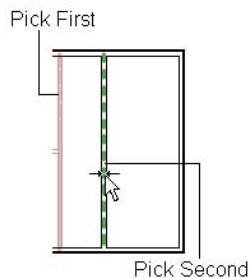
Creating the Deck

You now modify Level 2 to add a roof deck. The first step is to create a new wall for it.

1. In the Project Browser under Floor Plans, double-click Level 2.
2. Zoom in on the right-hand side of the building model.
3. On the Basics tab of the Design Bar, click Wall.
4. In the Type Selector, click Basic Wall: Wood Stud w/Vertical Siding.
5. Select Parapet for Height.
6. Sketch a wall by starting from the north wall and ending at the south wall.



7. On the Tools toolbar, click  Align.
8. On the Options Bar, select Prefer wall centerlines.
9. Select the interior wall on Level 1 and then select the new wall on Level 2.

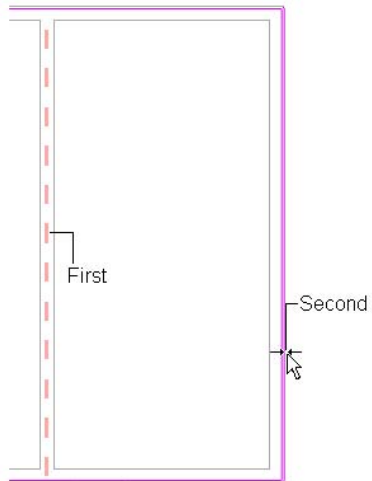


10. Click the blue padlock to lock the alignment.
11. If running with a subscription, press CTRL+S to save the file.
12. Leave the project open in its current view, and proceed to the next exercise, ["Modifying the Roof"](#).

Modifying the Roof

Now you modify the roof to open the deck up overhead.

1. In the Project Browser under Floor Plans, double-click Roof.
2. On the View menu, click Wireframe to make it easier to highlight the roof.
3. Place the cursor over an exterior wall, press TAB to highlight the roof and select the roof.
4. On the Options Bar, click  Edit
5. On the Tools toolbar, click  Align
6. On the Options Bar, click Prefer wall centerlines.
7. Select the centerline of the new wall as the first reference.
8. Select the sketch line on the east wall as the second reference.

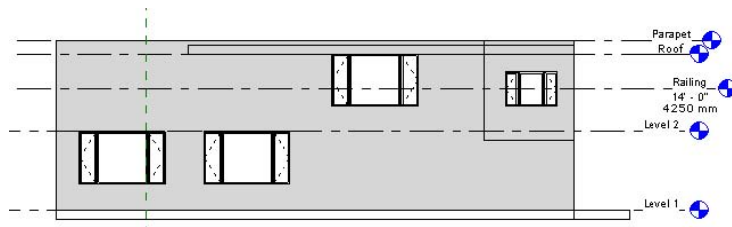


9. On the Design Bar, click Finish Roof.
10. If running with a subscription, press CTRL+S to save the file.
11. Leave the project open in its current view, and proceed to the next exercise, [“Creating a Railing Level”](#).

Creating a Railing Level

In this part of the exercise you are going to create a level for the railing that goes on the deck.

1. In the Project Browser under Elevations, double-click North.
2. On the Basics tab of the Design Bar, click Level.
3. Sketch the new level 5 feet [1500 mm] above Level 2.
4. Change its name to Railing, and click Yes when prompted to rename all corresponding views.



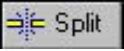
5. If running with a subscription, press CTRL+S to save the file.
6. Leave the project open in its current view, and proceed to the next exercise, ["Modifying the Deck Walls"](#).

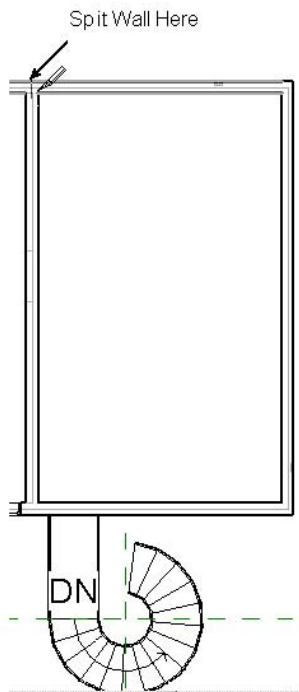
Modifying the Deck Walls

Now you are going to lower walls on the north and east side of the model. These walls go up to the new railing level, so that you can attach a railing to them.

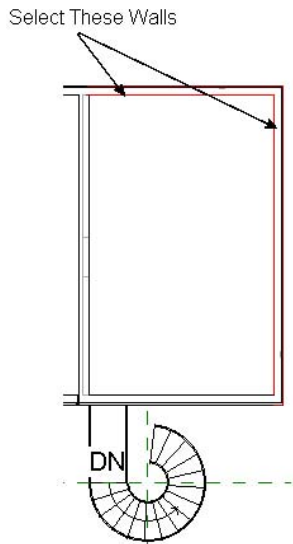
1. In the Project Browser under Floor Plans, double-click Level 2.

You need to split the north wall in order to lower it to the railing level.

2. On the Tools toolbar, click  Split
3. Split the north wall where it meets the deck wall, as shown.



4. Click Modify, select one of the walls shown in the next figure, press and hold CTRL, and select the other wall.



5. Right-click and click Properties.
6. Select Up to level: Railing for Top Constraint and click OK.
7. Open the 3D view to see the result.

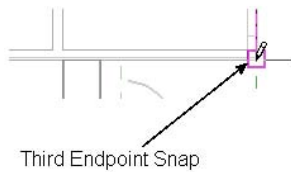
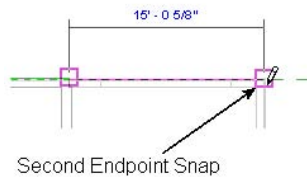
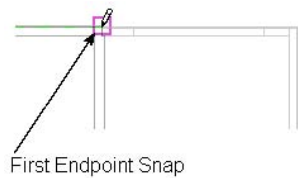


8. If running with a subscription, press CTRL+S to save the file.
9. Leave the project open in its current view, and proceed to the next exercise, [“Adding the Railings”](#).

Adding the Railings

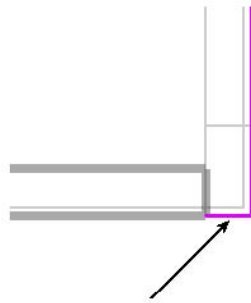
Now you add the railings to the deck.

1. In the Project Browser under Floor Plans, double-click Railing.
2. On the Modelling tab of the Design Bar, click Railing.
3. On the Sketch tab of the Design Bar, click Railing Properties.
4. In the Element Properties dialog box, click Terrace Railing for Type.
5. Click OK.
6. On the Design Bar, click Lines.
7. On the Options Bar, select , select Chain, and click .
8. Sketch the railing on the two walls as shown by noting the endpoint snaps that display as squares.



The railing makes a small jog to the left. You need to sketch this line to complete the railing.

9. Zoom in on the lower right corner and sketch a line to the endpoint of the wall with the landing as shown.

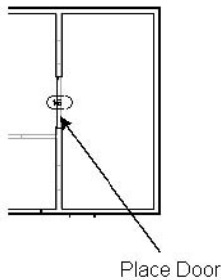


10. On the Design Bar, click Finish Sketch.
11. Open the 3D view to see the result.
12. If running with a subscription, press CTRL+S to save the file.
13. Leave the project open in its current view, and proceed to the next exercise, [“Adding Deck Doors”](#).

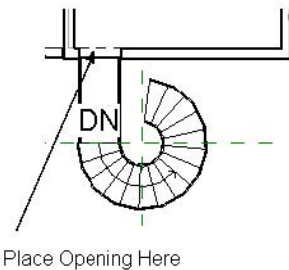
Adding Deck Doors

You are going to add an opening to the landing and a door to the main part of the house.

1. In the Project Browser under Floor Plans, double-click Level 2.
2. On the Basics tab of the Design Bar, click Door
3. In the Type Selector, click Sliding-2 panel : 72" X 78" [Sliding_Panel : 1800 X 2100 mm].
4. Place the door in the deck wall approximately where shown.



5. Zoom in on the landing.
6. On the Basics tab of the Design Bar, click Component.
7. In the Type Selector, click Opening-Cased : 36" X 84" [Cased-Opening : 900 X 2100 mm].
8. Place the opening on the exterior wall to provide an opening to the landing.



9. Open the 3D view to see the results.



10. If running with a subscription, press CTRL+S to save the file.
11. Leave the project open in its current view, and proceed to the next exercise, [“Documenting the Model”](#).

Documenting the Model

In this section of the exercise, you are going to create a window schedule and a section view, and add the section view to a sheet.

1. On the View menu, click New ➤ Schedule/Quantities.
2. In the New Schedule dialog box, select Windows under Category, and select Schedule building components.
3. Click OK.
4. On the Fields tab of the Schedule Properties dialog box, double-click the following field types under Available fields to add them to Scheduled fields (in order):
 - Count
 - Family and Type
 - Height
 - Level
 - Type Mark
 - Width
5. Under Scheduled fields (in order), select a field, and click Move Up or Move Down to place the scheduled fields in the following order:
 - Type Mark
 - Family and Type
 - Width
 - Height
 - Level
 - Count
6. Click the Sorting/Grouping tab and select Type Mark for Sort by.
7. Select Grand Totals and clear Itemize every instance at the bottom of the tab.
8. Clear Itemize every instance at the bottom of the tab.
9. Click the Formatting tab and select Family and Type from the Fields list.

10. Under Heading, enter Window Types and click OK.

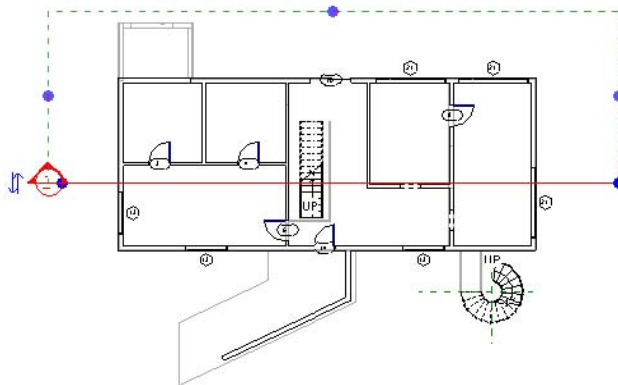
Window Schedule					
Type Mark	Window Types	Width	Height	Level	Count
11	Picture-Side Casements: 72" x 36"	6' - 0"	3' - 0"	Level 1	2
13	Picture-Side Casements: 72" x 48"	6' - 0"	4' - 0"	Level 2	2
14	Picture-Side Casements: 120" x 72"	10' - 0"	6' - 0"	Level 1	3
16	Picture-Side Casements: 180" x 24"	15' - 0"	2' - 0"	Level 2	4
18	Picture-Side Casements: 120" X 24"	12' - 0"	2' - 0"	Level 1	1
Grand total: 12					

Window Schedule					
Type Mark	Window Types	Width	Height	Level	Count
28	Picture-Side Casements_M: 3050 X 1250mm	3050	1250	Level 1	3
29	Picture-Side Casements_M: 1850 X 1200mm	1850	1200	Level 1	3
30	Picture-Side Casements_M: 3050 X 900mm	3050	900	Level 2	3
31	Picture-Side Casements_M: 4500 X 900mm	4500	900	Level 2	1
32	Picture-Side Casements_M: 1800 X 900mm	1800	900	Level 2	2
Grand total: 12					

Now you create a section view.

11. In the Project Browser under Floor Plans, double-click Level 1.
12. Right-click and click Zoom to Fit.
13. On the Basics tab of the Design Bar, click Section.
14. Click to the left of the building to start the section line. Move the cursor to the right of the building and click to end the section line.

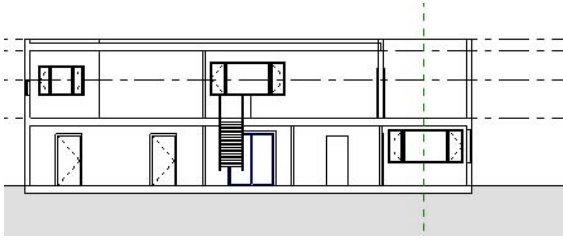
A section box is displayed with the section line.



NOTE If the section box does not display above the north wall, drag the blue circle control up away from the wall.

15. Click away from the section line so that it is no longer selected.

16. Place the cursor on the Section Head and double-click to open the section view you just created.



17. If running with a subscription, press CTRL+S to save the file.

18. Leave the project open in its current view, and proceed to the next exercise, [“Adding Views to a Sheet”](#).

Adding Views to a Sheet

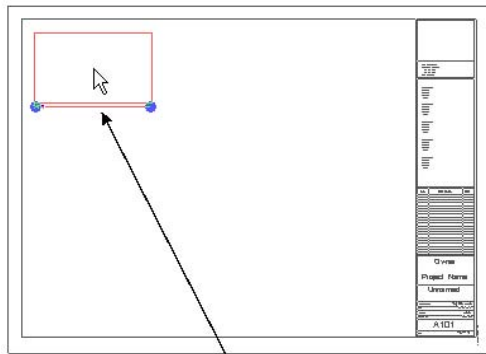
You are now going to add the section view to a drawing sheet.

1. On the View menu, click New ➤ Sheet.
2. In the Select a Titleblock dialog box, select E1 30 X 42 Horizontal : 30X42 Horizontal [A0 metric] and click OK.

The sheet view opens.

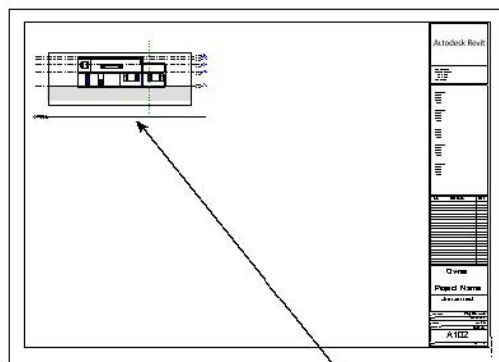
3. In the Project Browser under Views (all), expand Sections.
4. Select the section and drag it onto the sheet.

When you release the mouse button, a preview image of the view displays.



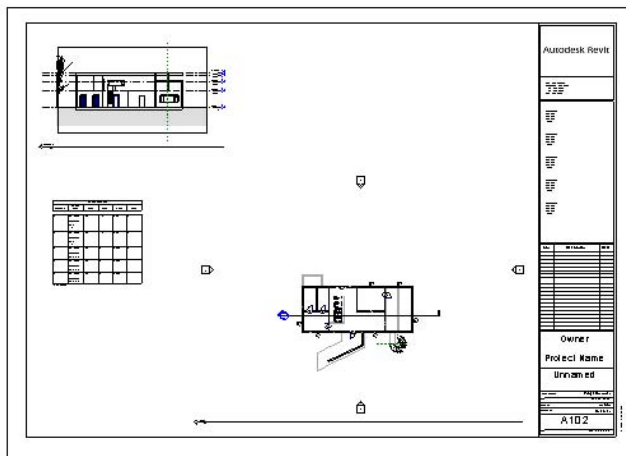
Preview of Pane

5. Click to place the view where shown.



Place This View

6. Repeat the same procedure by adding the schedule view and the Floor Plan : Level 1 view.



7. If running with a subscription, press CTRL+S to save the file.
8. Leave the project open in its current view, and proceed to the next exercise, ["Rendering the Model"](#) .

Rendering the Model

You are almost done. Now you render your house to produce the finished result.

1. In the Project Browser under 3D Views, double-click Perspective View.
2. On the Rendering tab of the Design Bar, click Raytrace.
3. On the Options Bar, click Go.

Autodesk Revit begins to render the building model. This may take a few minutes.

4. If running with a subscription, press CTRL+S to save the file.

Conclusion

You have just finished the Getting Started exercise for Autodesk Revit. You have seen how easy it is to learn and use. You have also seen some of the power of the software. This is only the beginning. There is still much more functionality that you need to experience before you fully understand the power of Autodesk Revit.

For more practice, you may wish to add more interior and site elements to the design. You can also complete some of the tutorials that are available within Autodesk Revit. In the interface, choose Tutorials from the Help menu to see a complete list of self-paced exercises.

You can also participate in an Autodesk Revit Distance Learning Seminar. Go to www.autodesk.com/revit and register for a 1-hour long seminar. Our expert instructors will teach you how to use the software, and you can do it from the comfort and convenience of your own desk. All you need is Internet access, a web browser, and you are ready to learn.