Part II: Adding Doors and Windows

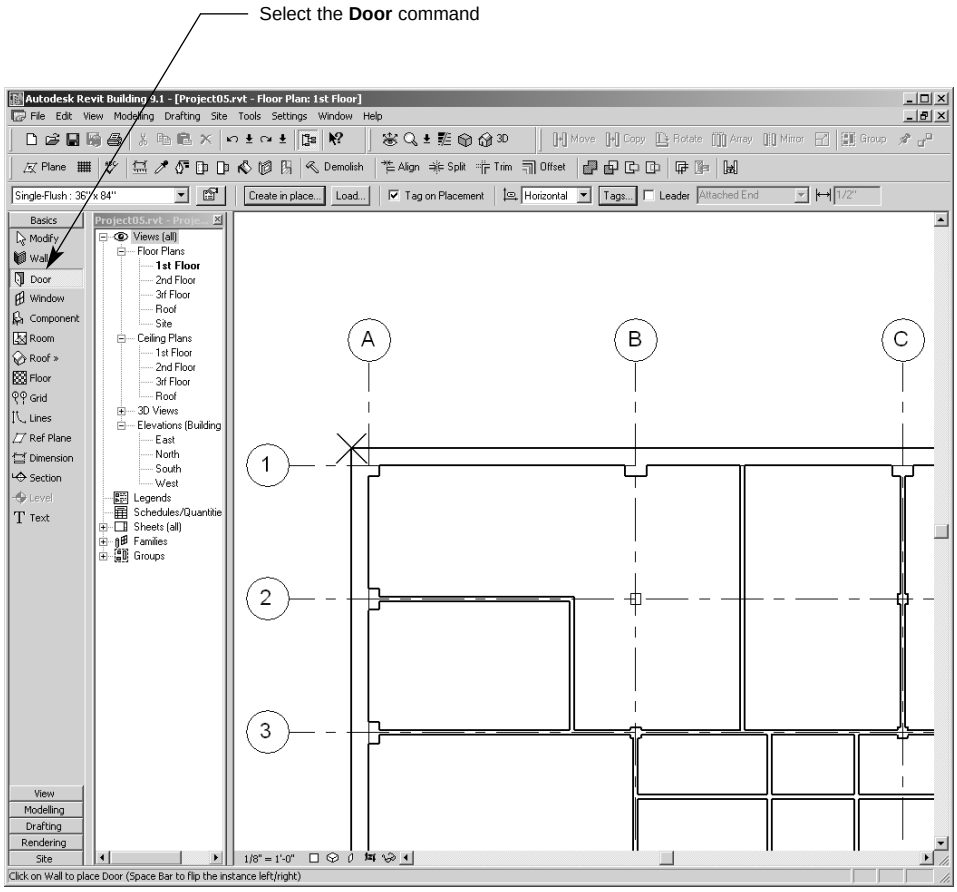
In this section of the exercise, you will learn how to add doors and windows to the building.

Load Door Types into the Project

Doors are considered **hosted objects**, therefore they must be placed on existing walls when adding them to a project. Temporary dimensions can be used to assist you in placing doors. The first door type you will add is not yet loaded into the project. Next, you will load additional door types.

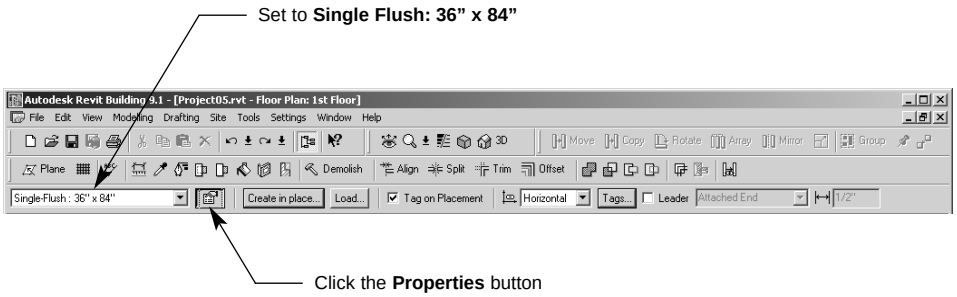
1. Use the **Zoom In Region** command to magnify the area between grid lines **1-A** and **3-C**.

2. Select the **Door** command in the **Basics** tab of the **Design Bar**.

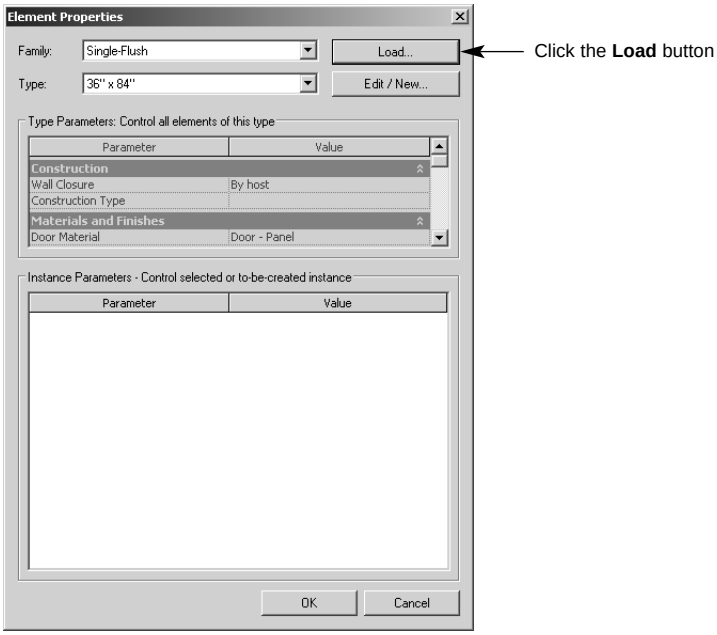


3. Verify that the **Type Selector** option menu is set to **Single Flush: 36” x 84”**.

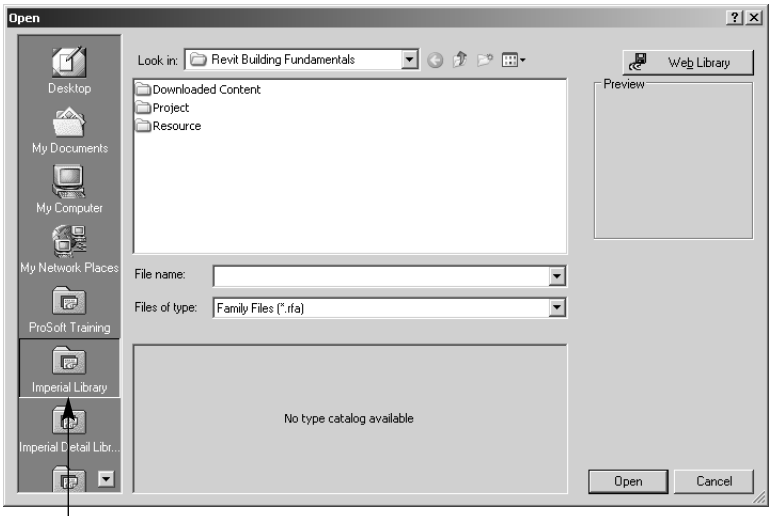
4. Click the **Properties** button. The Element Properties dialog box appears.



5. Click the **Load** button. The Open dialog box appears.



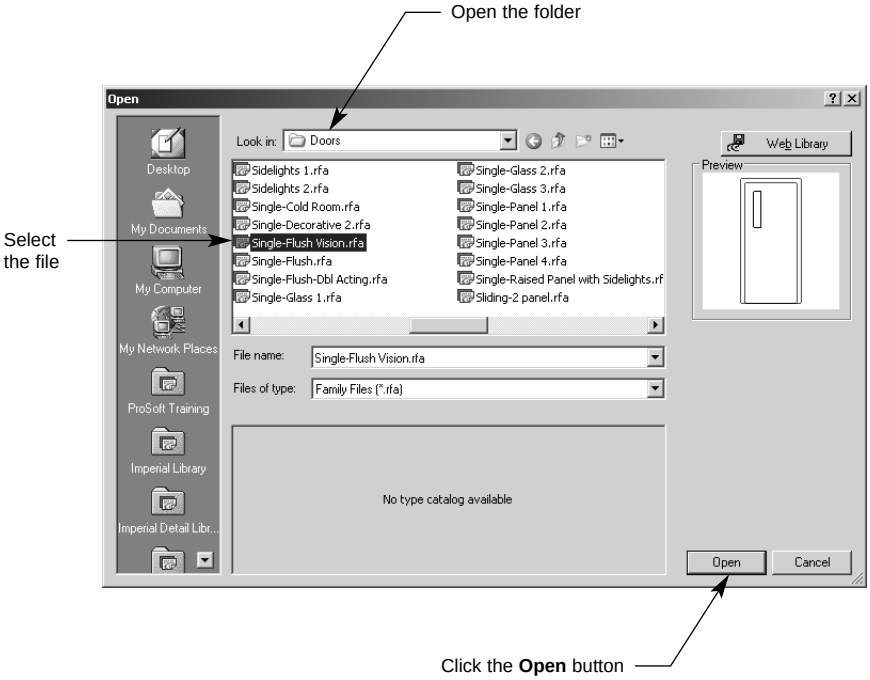
6. Click on the **Imperial Library** icon located on the left side of the dialog box. The directory is automatically set to **C:\Documents and Settings\All Users\Application Data\Autodesk\Revit Building 9.1\Imperial Library**.



Click on the **Imperial Library** icon

7. Open the **Doors** folder, and then select the family file called **Single-Flush Vision.rfa**.

8. Click the **Open** button to load the family file.



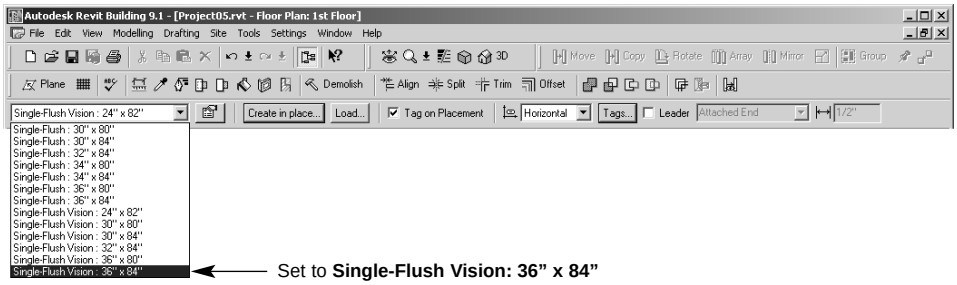
This is the default storage location of the **Imperial Library** for Revit Building 9.1. The actual storage location of your building components may be different, depending on your standards. See your CAD administrator for more information.

If you do not have the **Imperial Library** installed, you can download the family file (**Single-Flush Vision.rfa**) from the **Autodesk Revit Distribution Center** by clicking on the **Web Library** button in the Open dialog box.

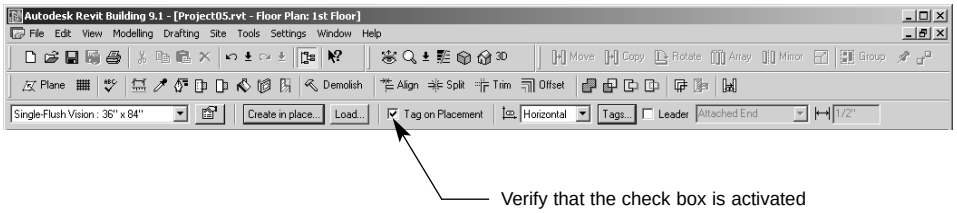
9. Click the **OK** button to dismiss the Element Properties dialog box.

10. Take a moment to review the door types that are now available in the **Type Selector** option menu. Notice the doors that are included in the loaded family file are now available for use.

11. Set the **Type Selector** option menu to **Single-Flush Vision: 36" x 84"**.

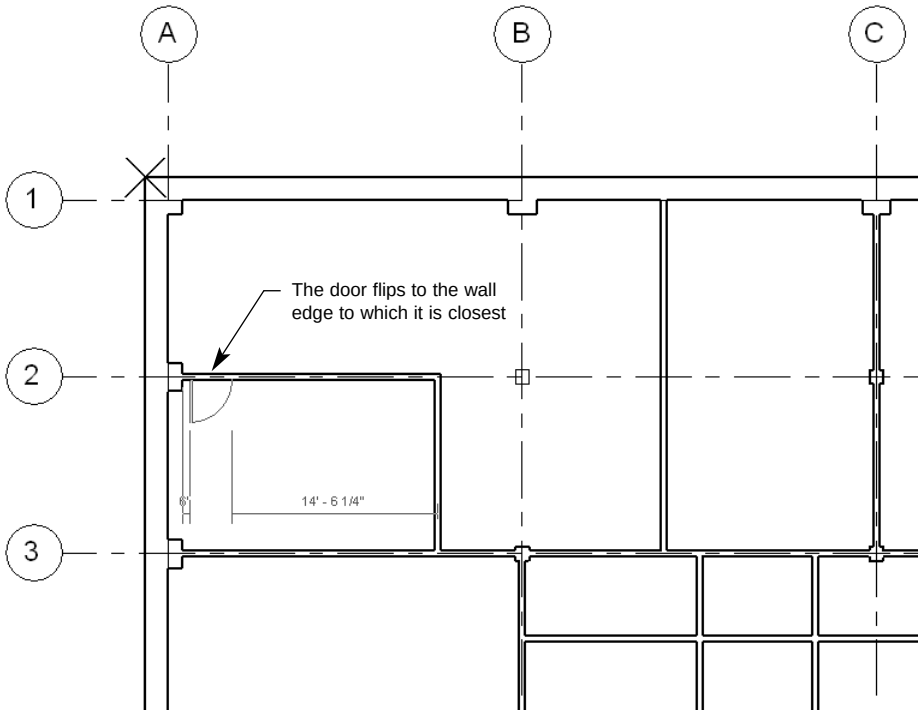


12. Verify that the **Tag on Placement** check box is activated. This ensures that tags are added to doors that are placed in the drawing. You are prompted to place the door on a wall.



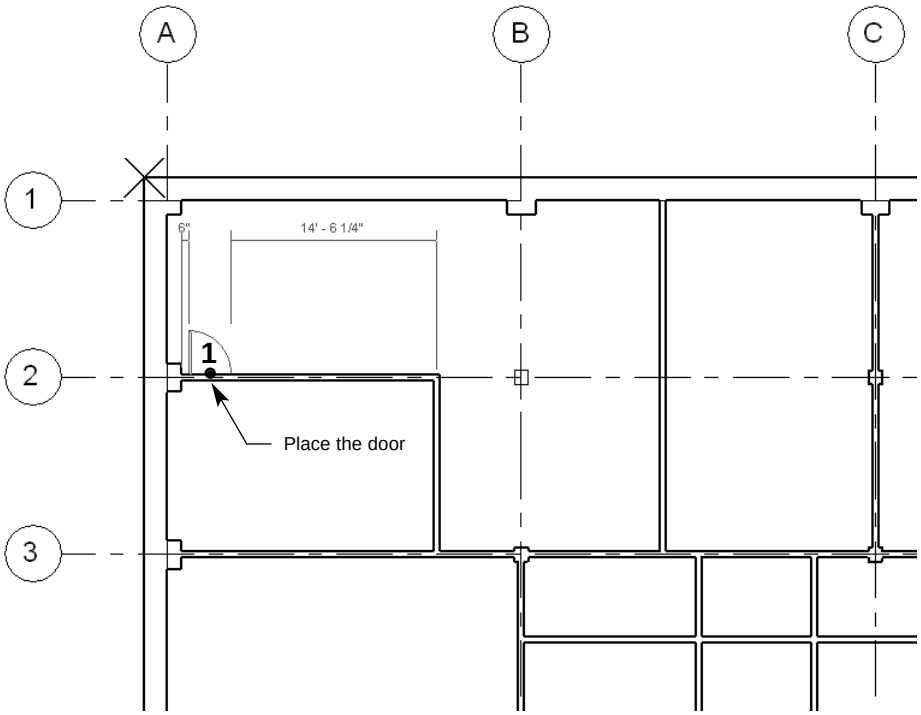
13. Move your cursor over the column that appears at the grid line labeled **2**. When the temporary dimensions appear, move your cursor **6** inches directly to the right.

14. Move your cursor above and below the wall. Notice the door flips to the wall edge to which it is closest.

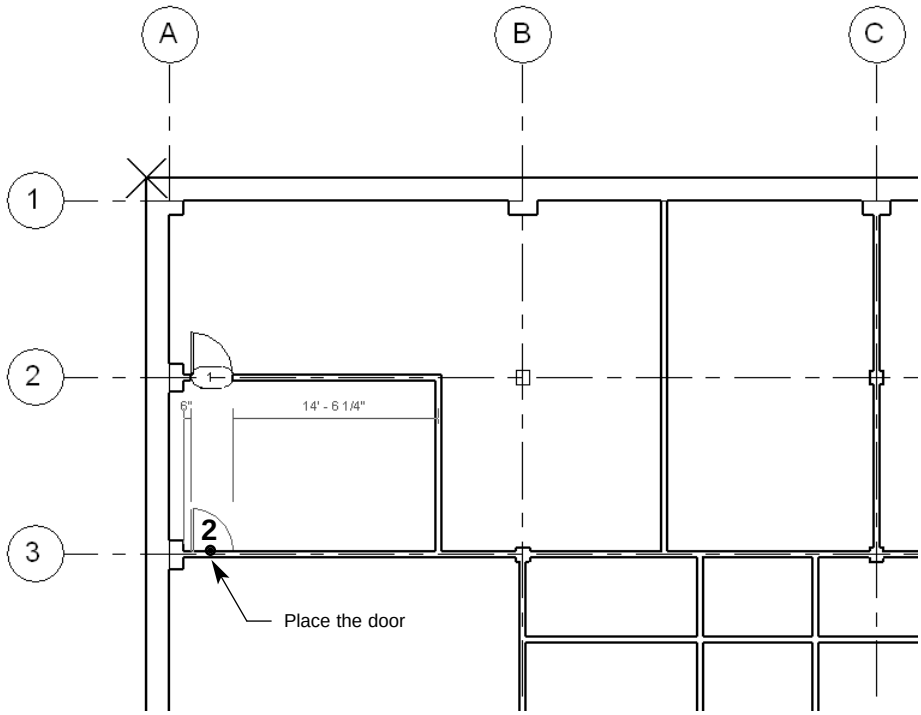


15. With the door positioned above the wall, press **[SPACEBAR]** on your keyboard. The door swing flips from left to right.

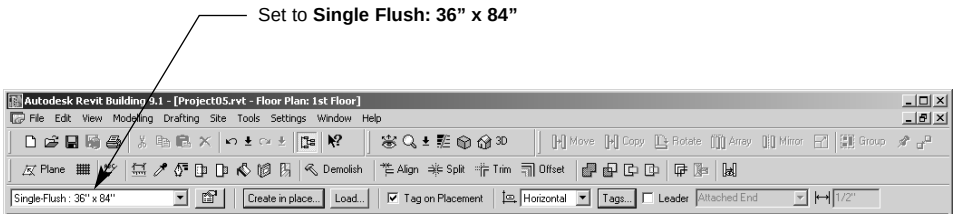
16. Click the left mouse button to place the door in the wall (*point 1*), as shown in the figure below. You are prompted to place an additional wall.



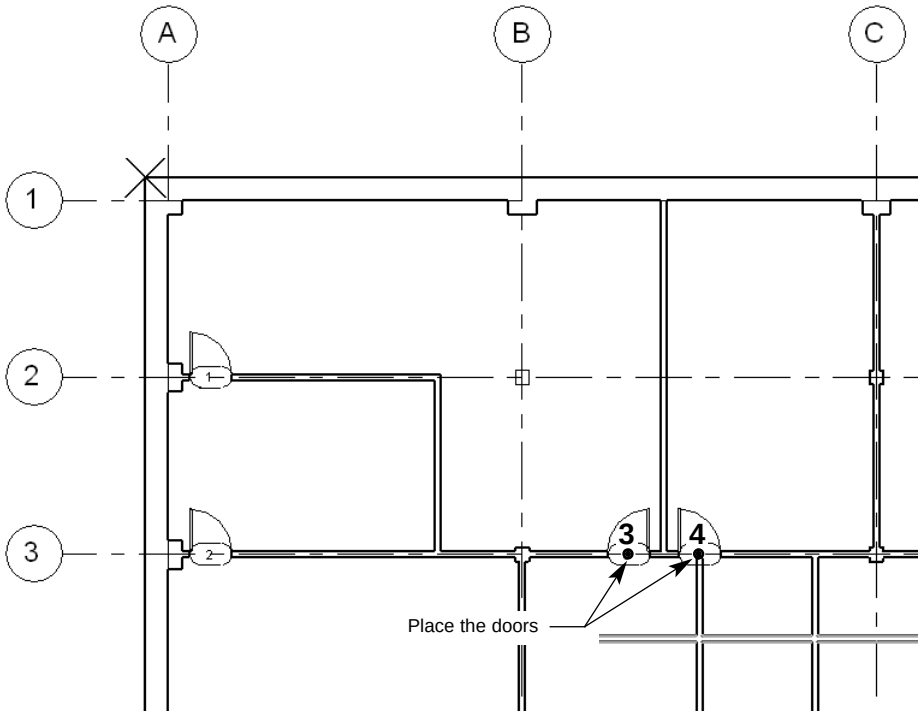
17. Move your cursor directly below the door to the same location on the grid line labeled **3**, and then click the left mouse button to place the door (*point 2*).



18. Set the **Type Selector** option menu to **Single Flush: 36" x 84"**. You are prompted to place a door.



19. Using what you have learned, place two additional doors as shown in the figure below (*points 3 and 4*). The doors should be placed **12 inches** from the centerline of the vertical wall.



20. When placing door **4**, a Warning dialog box appears, indicating that there is a conflict with the location of the door and an existing joining wall. You will correct this issue in an upcoming exercise. For now, press **[ESC]** on your keyboard to dismiss the warning.

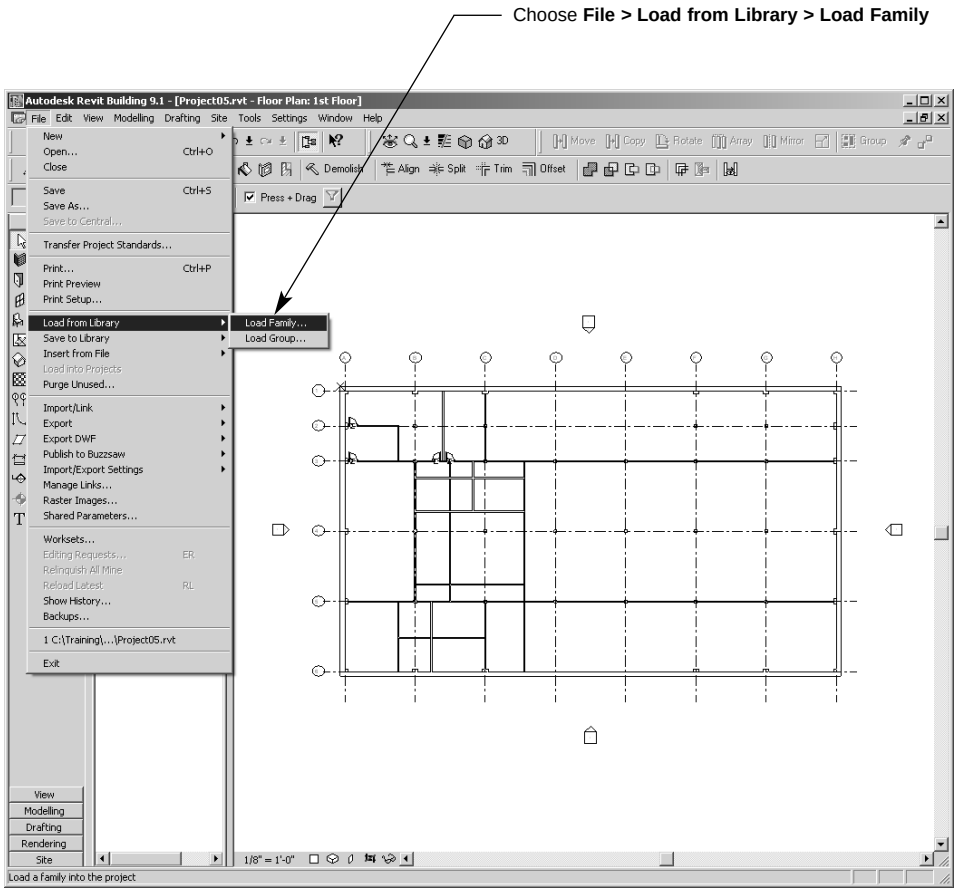
Press **[ESC]** to dismiss the warning

21. Use the **Zoom To Fit** command to fit the view.

Add the Remaining Doors

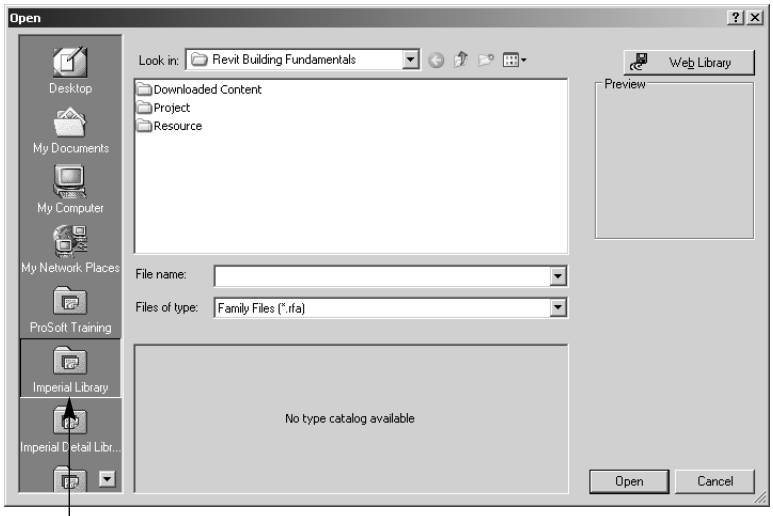
Next, you will add the remaining doors to the project using the dimensions provided. First, you must load additional door types to the project.

1. Choose **File > Load from Library > Load Family** from the Revit Building menu bar. The Open dialog box appears.



If you do not have the **Imperial Library** installed, you can download the family files (**Double-Glass 1.rfa** and **Single-Glass 1.rfa**) from the **Autodesk Revit Distribution Center** by clicking on the **Web Library** button in the Open dialog box.

2. Click on the **Imperial Library** icon located on the left side of the dialog box. The directory is automatically set to **C:\Documents and Settings\All Users\Application Data\Autodesk\Revit Building 9.1\Imperial Library**.

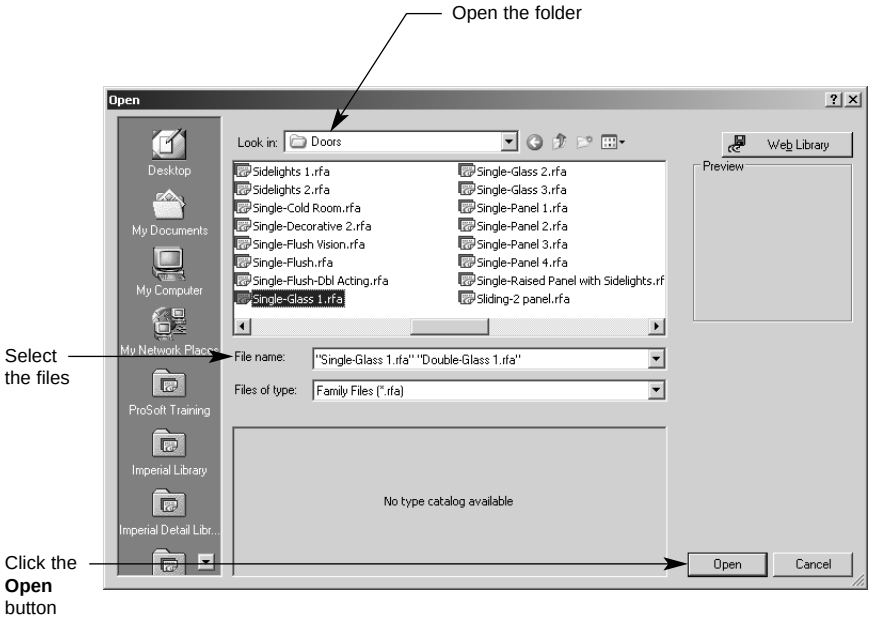


Click on the **Imperial Library** icon

3. Open the **Doors** folder.

4. Press and hold **[CTRL]** on your keyboard, and then select the family files called **Double-Glass 1.rfa** and **Single-Glass 1.rfa**.

5. Click the **Open** button to load the family files.



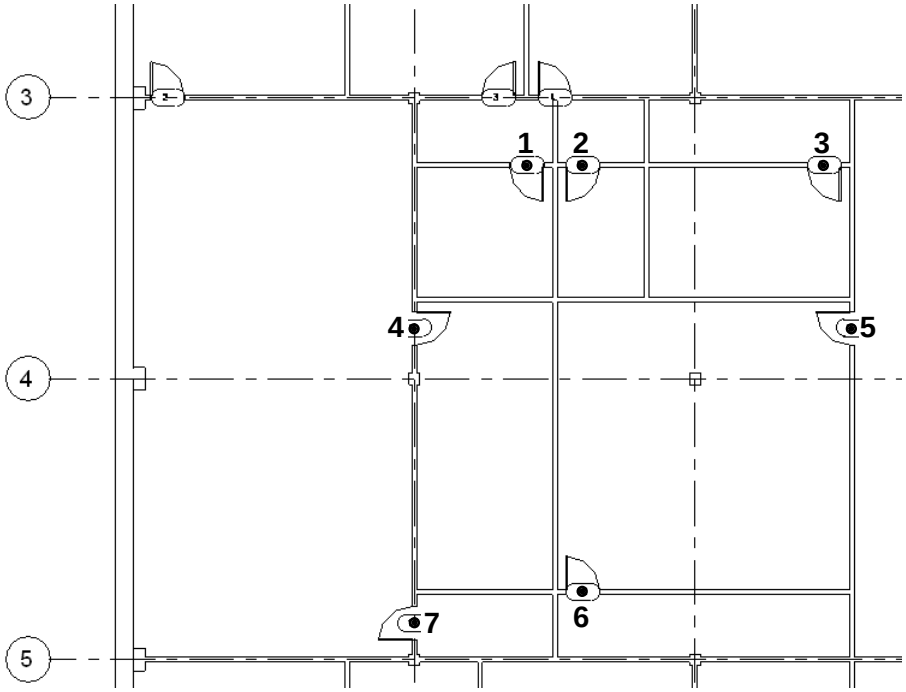
6. Use the **Zoom In Region** command to zoom into the area between the grid lines **3-A** and **5-D**.

7. Using what you have learned, place the doors in the walls as shown in the figure below (*points 1-7*). Dimensions and door types are as follows:

   Points 1-3: Door type: **Single Flush 36" x 84"**
   Location: Offset **1' 0"** from nearest wall

   Points 4-6: Door type: **Single Glass 1: 36" x 84"**
   Location: Offset **1' 0"** from nearest wall

   Point 7: Door type: **Single Glass 1: 36" x 84"**
   Location: Centered between walls



Door tags will appear labeled **5** through **11**.

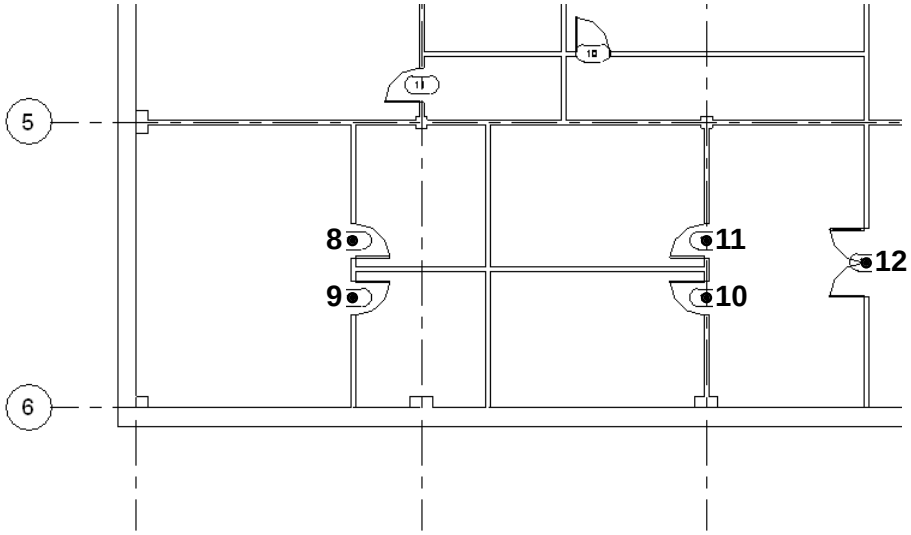
8. Use the **Zoom To Fit** command to fit the view.

9. Use the **Zoom In Region** command to zoom into the area between the grid lines **5-A** and **6-D**.

10. Using what you have learned, place the doors in the walls as shown in the figure below (*points 8-12*). Dimensions and door types are as follows:

    Points 8-11: Door type: **Single Flush 36" x 84"**
    Location: Offset **1' 0"** from nearest wall

    Point 12: Door type: **Double Glass 1: 72" x 84"**
    Location: Centered between walls (approximately)



Door tags will appear labeled **12** through **16**.

The double-glass door does not need to be centered exactly between the perpendicular walls. You will use the modification tools to center it properly in the next chapter.

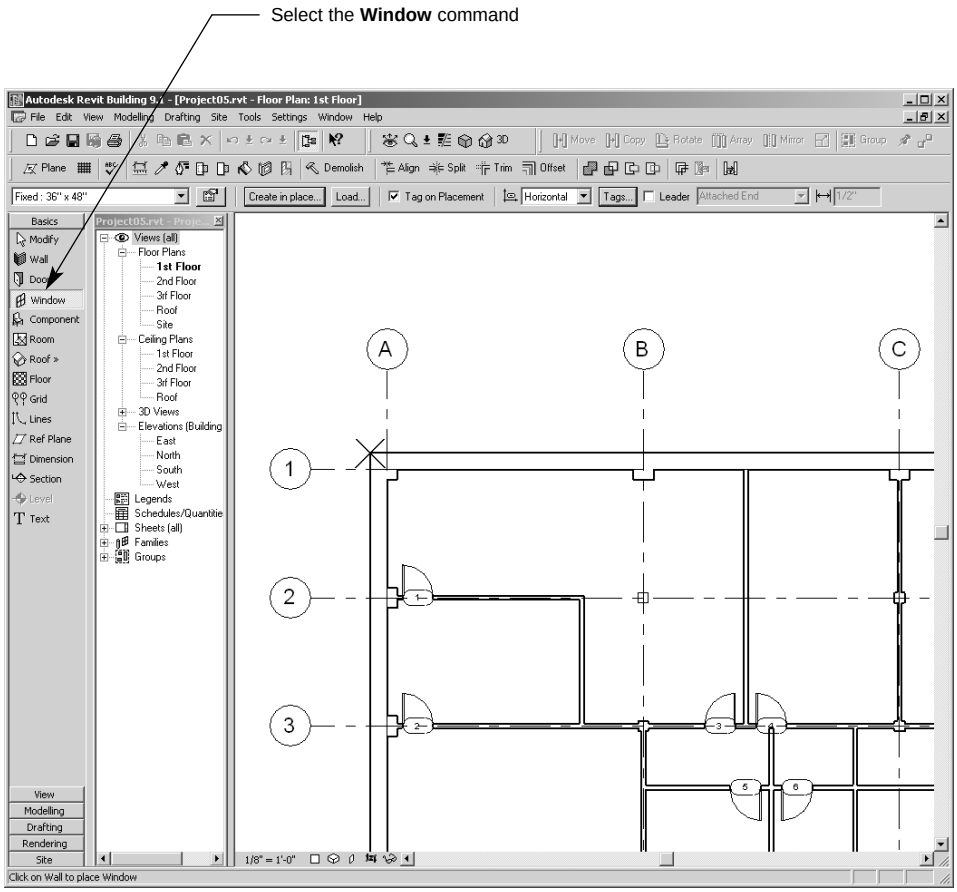
11. Use the **Zoom To Fit** command to fit the view.

Add Windows to the Top Exterior Wall

Like doors, windows are considered **hosted objects** and must be placed on existing walls when adding them to a project. In this section, you will use temporary dimensions to assist you in placing windows.

1. Use the **Zoom In Region** command to zoom into the area between grid lines **1-A** and **3-C**.

2. Select the **Window** command from the **Basics** tab of the **Design Bar**.

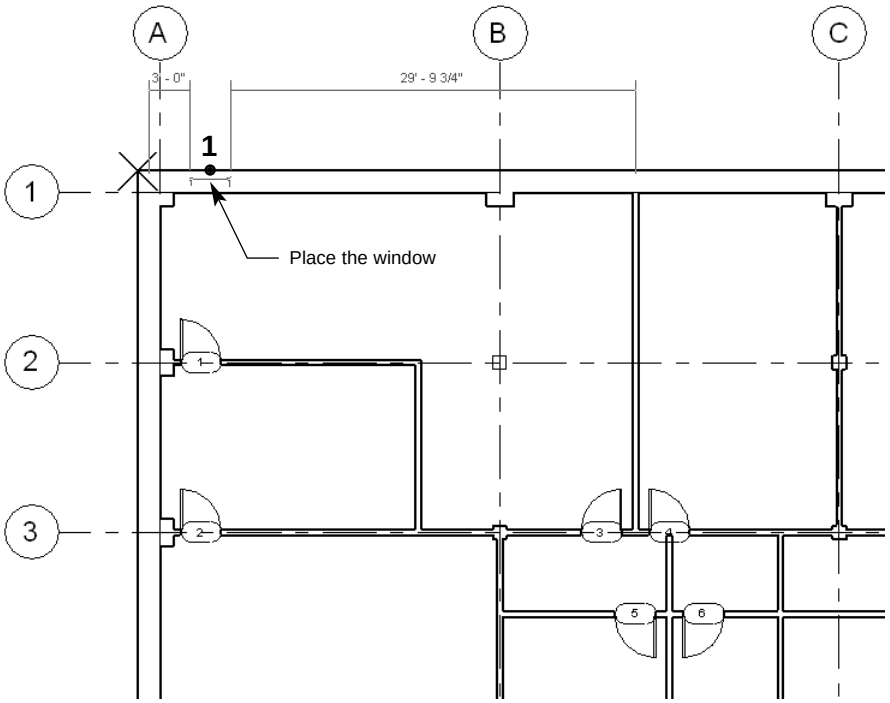


3. Set the **Type Selector** option menu to **Fixed: 36" x 48"**.

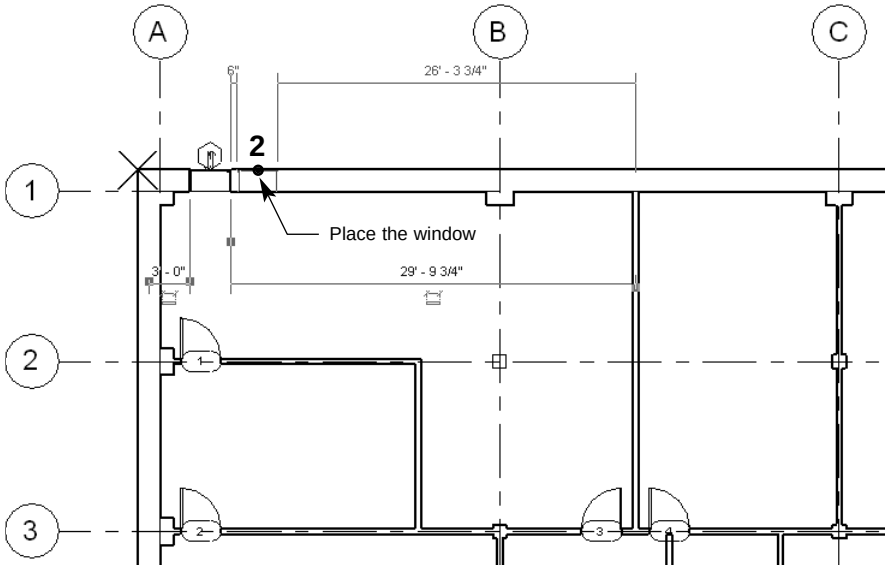
4. Verify that the **Tag on Placement** check box is activated. This ensures that tags are added to windows that are placed in the drawing. You are prompted to place the window on a wall.

5. Move your cursor over the top exterior wall that appears at the grid line labeled **1**. When the temporary dimensions appear, move your cursor **3 feet** directly to the right. Be sure to position your cursor outside of the building to display the dimensions correctly. Additionally, this will ensure the window tag is placed outside of the building.

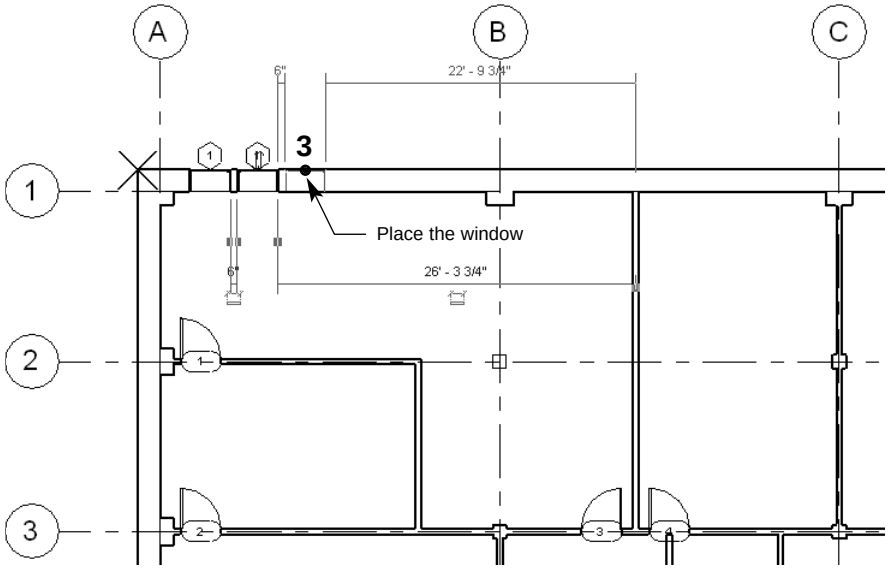
6. Click the left mouse button to place the window in the wall (*point 1*), as shown in the figure below. The window tag appears outside of the building and you are prompted to place an additional window.



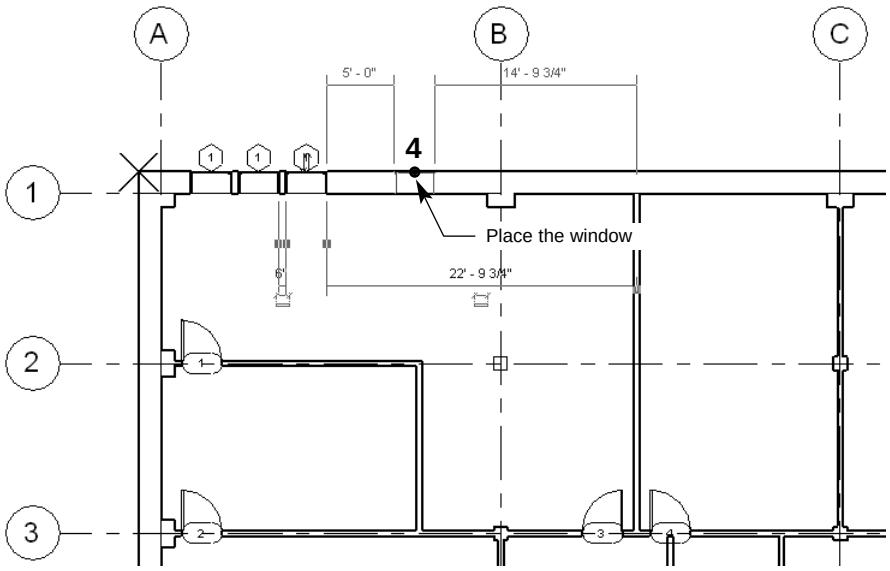
7. Move your cursor **6 inches** directly to the right, and then click the left mouse button to place the window in the wall (*point 2*), as shown in the figure below. The window tag appears outside of the building and you are prompted to place an additional window.



8. Move your cursor **6 inches** directly to the right, and then click the left mouse button to place the window in the wall (*point 3*), as shown in the figure below.

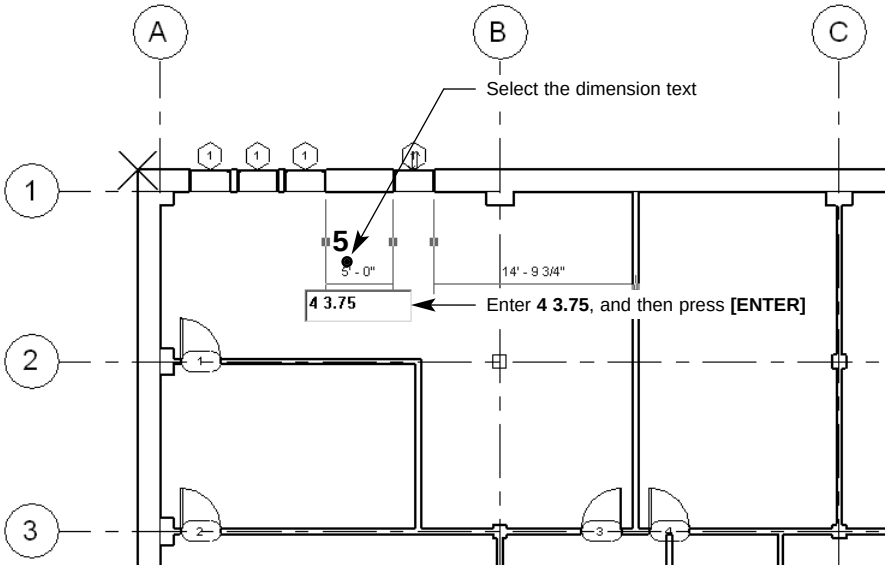


9. Move your cursor **5 feet** directly to the right, and then click the left mouse button to place the window in the wall (*point 4*), as shown in the figure below.

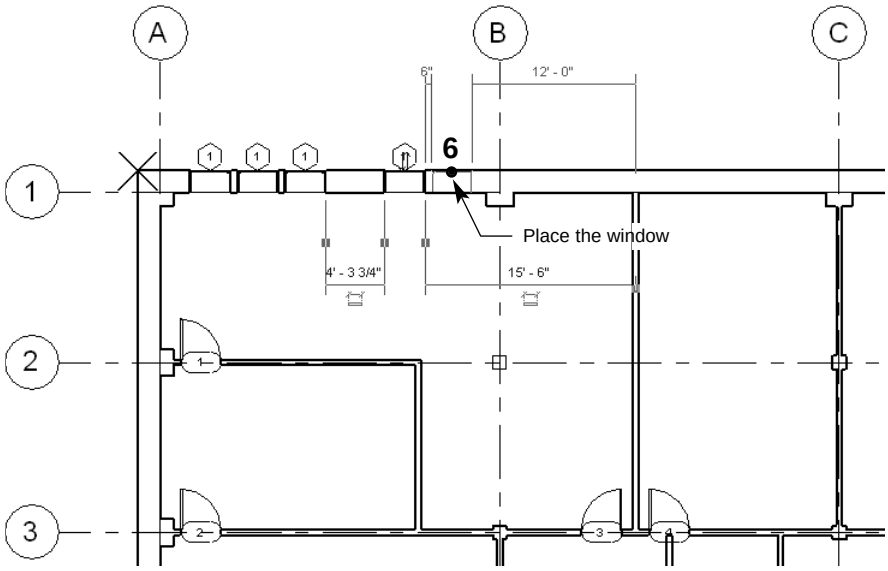


10. Select the dimension text that reads **5' 0"** (*point 5*), and then enter **4 3.75** in the field that appears

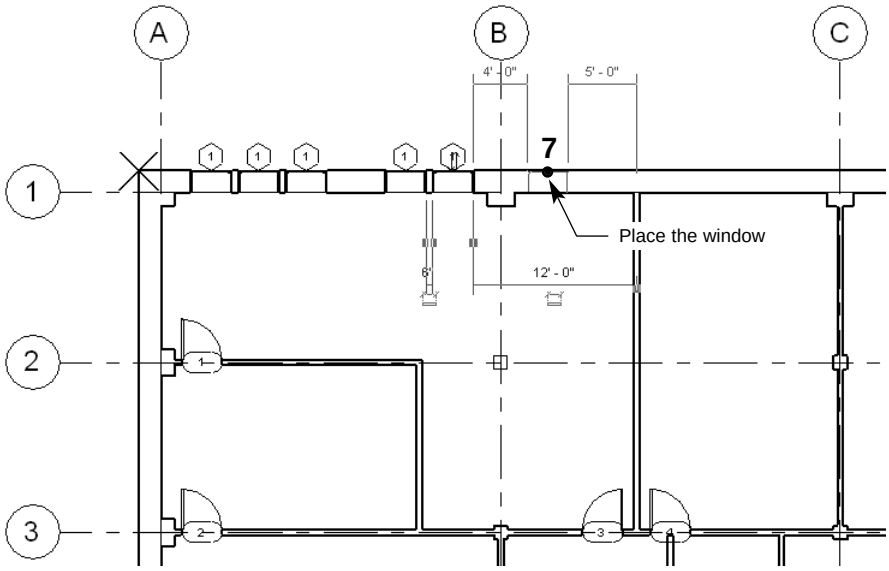
11. Press **[ENTER]** on your keyboard to update the dimension measurement.



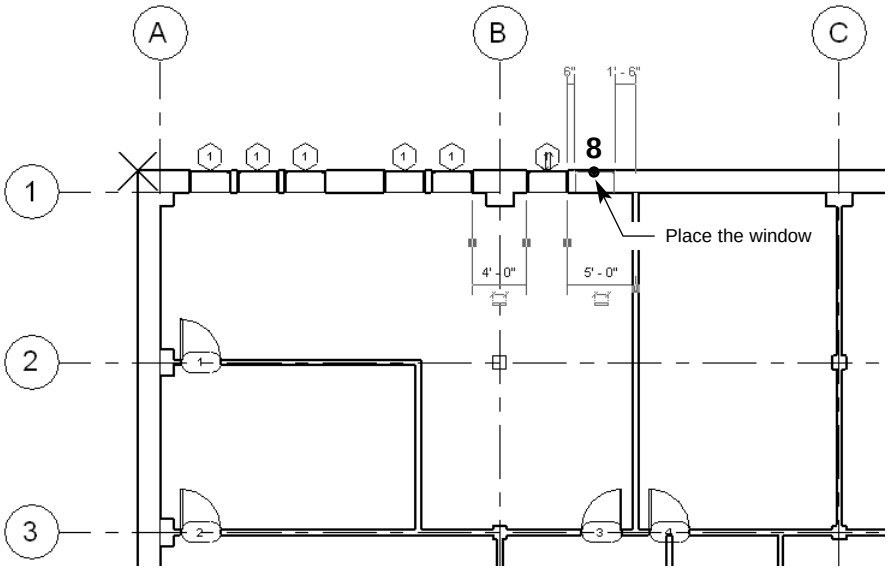
12. Move your cursor **6 inches** directly to the right, and then click the left mouse button to place the window in the wall (*point 6*), as shown in the figure below.



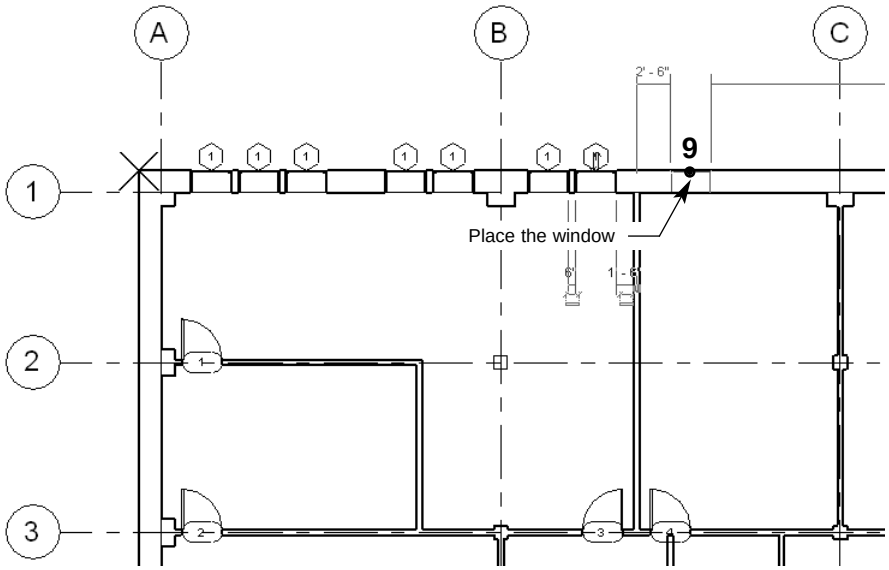
13. Move your cursor **4 feet** directly to the right, and then click the left mouse button to place the window in the wall (*point 7*), as shown in the figure below.



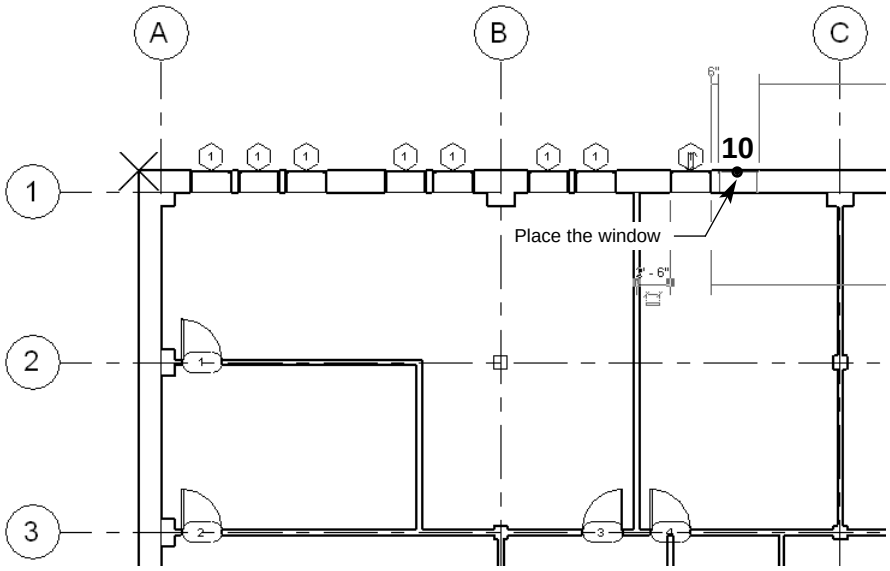
14. Move your cursor **6 inches** directly to the right, and then click the left mouse button to place the window in the wall (*point 8*), as shown in the figure below.



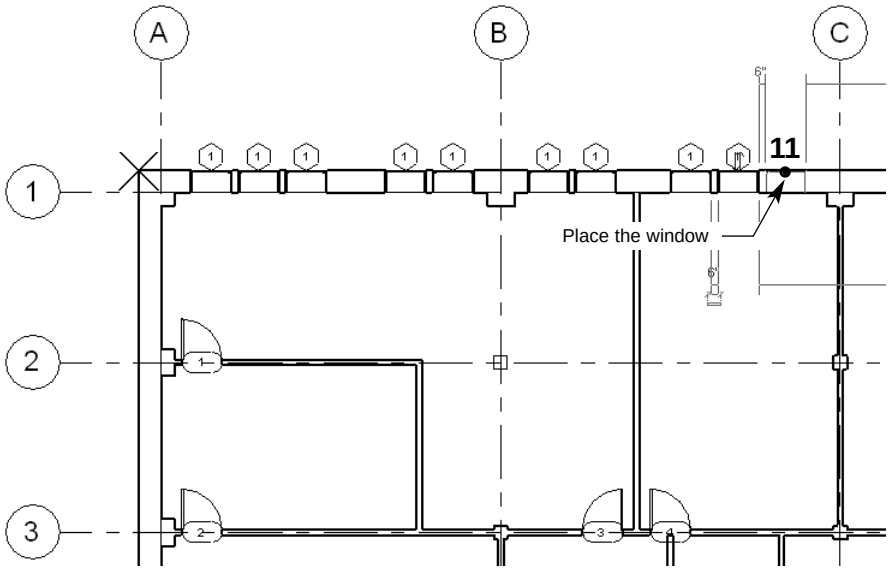
15. Move your cursor directly to the right, and then click the left mouse button when the dimension reads **2' 6"** from the interior vertical wall to place the window in the wall (*point 9*), as shown in the figure below.



16. Move your cursor **6 inches** directly to the right, and then click the left mouse button to place the window in the wall (*point 10*), as shown in the figure below.



17. Move your cursor **6 inches** directly to the right, and then click the left mouse button to place the window in the wall (*point 11*), as shown in the figure below.



18. Use the **Zoom To Fit** command to fit the view.

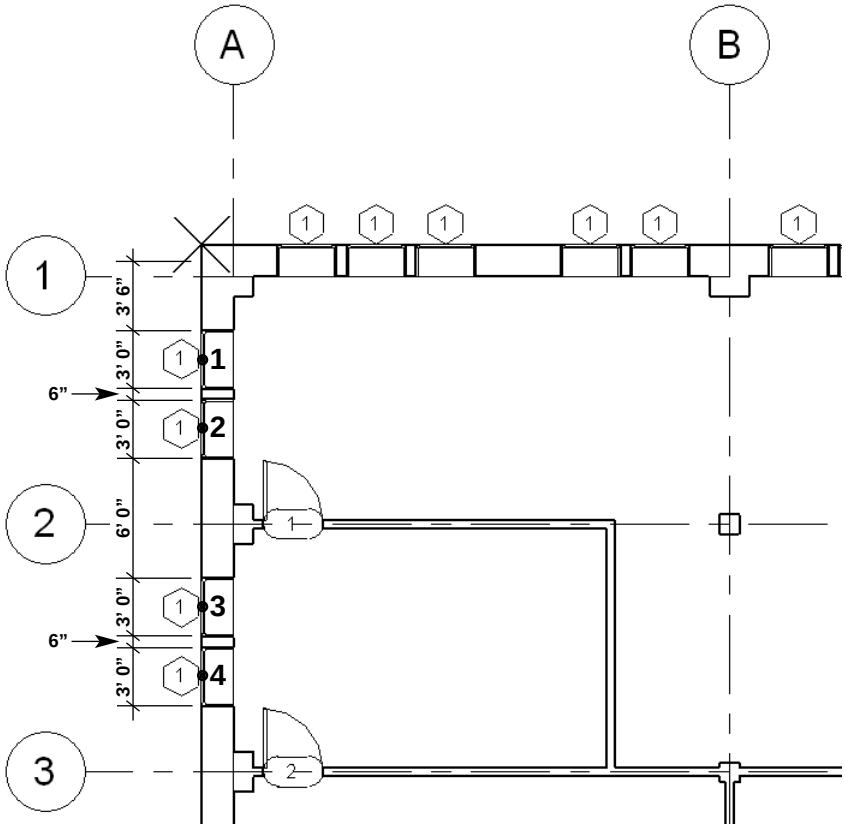
Add the Remaining Windows

In this section, you will place the remaining windows in the exterior walls. Continuing using the **Fixed 36" x 48"** window type. Dimensions are provided to assist you.

Add Windows to the West Exterior Wall

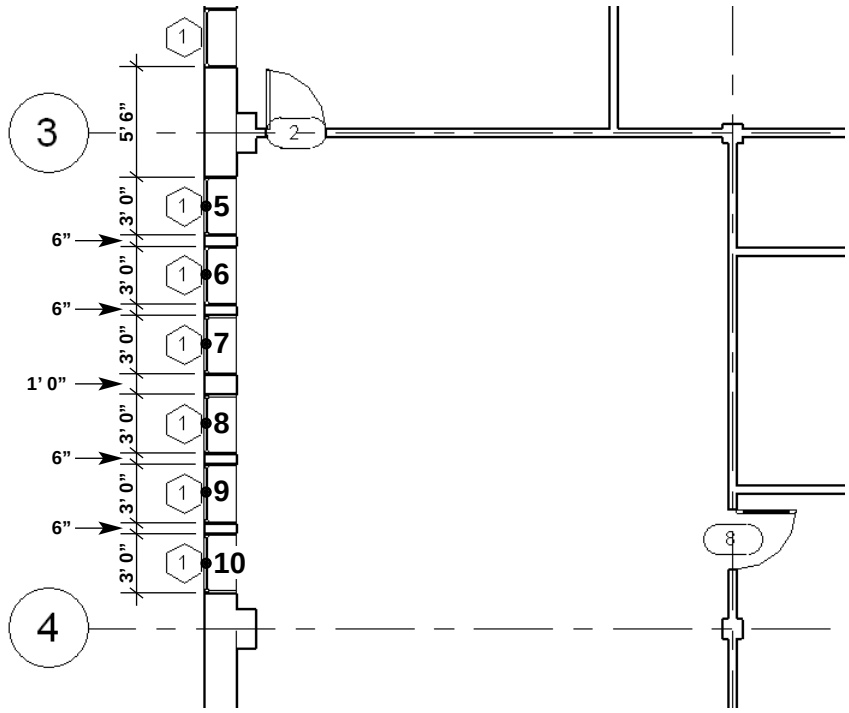
1. Use the **Zoom In Region** command to zoom into the area between grid lines **1-A** and **3-B**.

2. Using what you have learned, place the windows in the exterior wall, as shown in the figure below (*points 1-4*).



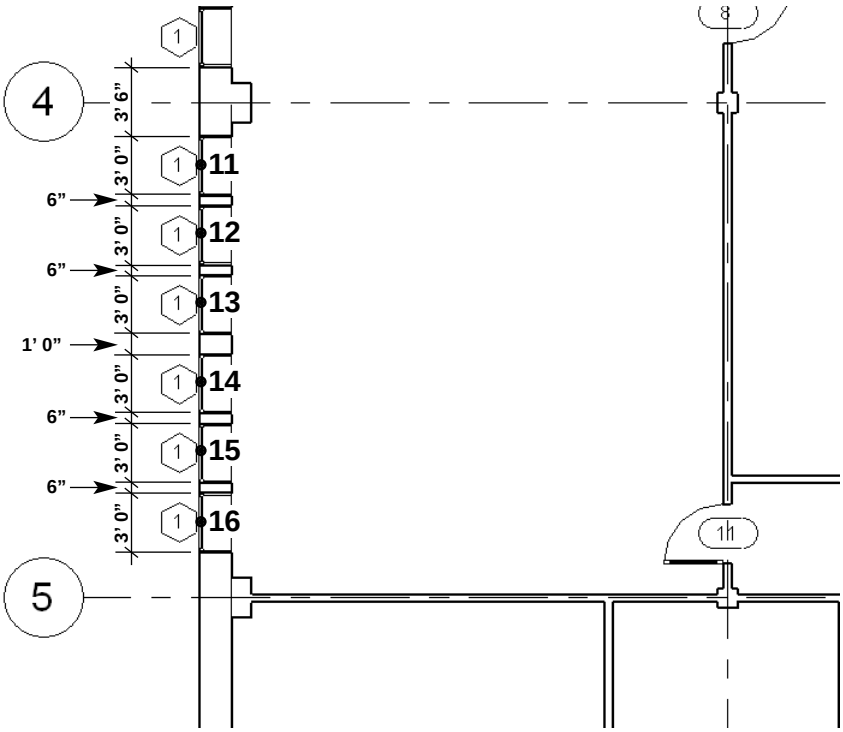
3. Use the scroll bars to pan the model down until the area between grid lines **3-A** and **4-A** appears in the view window.

4. Place the windows in the exterior wall, as shown in the figure below (*points 5-10*).



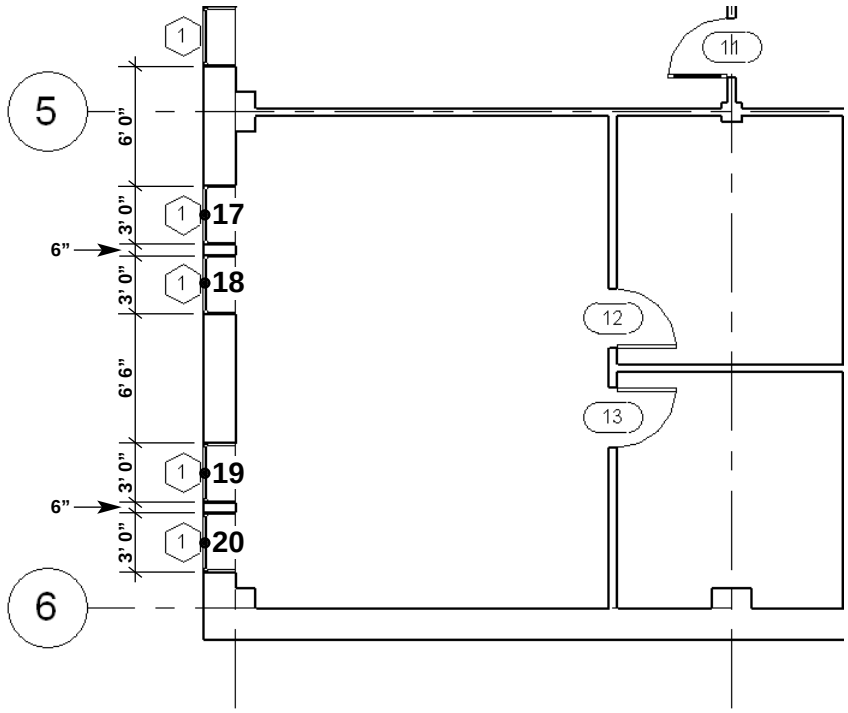
5. Use the scroll bars to pan the model down until the area between grid lines **4-A** and **5-A** appears in the view window.

6. Place the windows in the exterior wall, as shown in the figure below (*points 11-16*).



7. Use the scroll bars to pan the model down until the area between grid lines **5-A** and **6-A** appears in the view window.

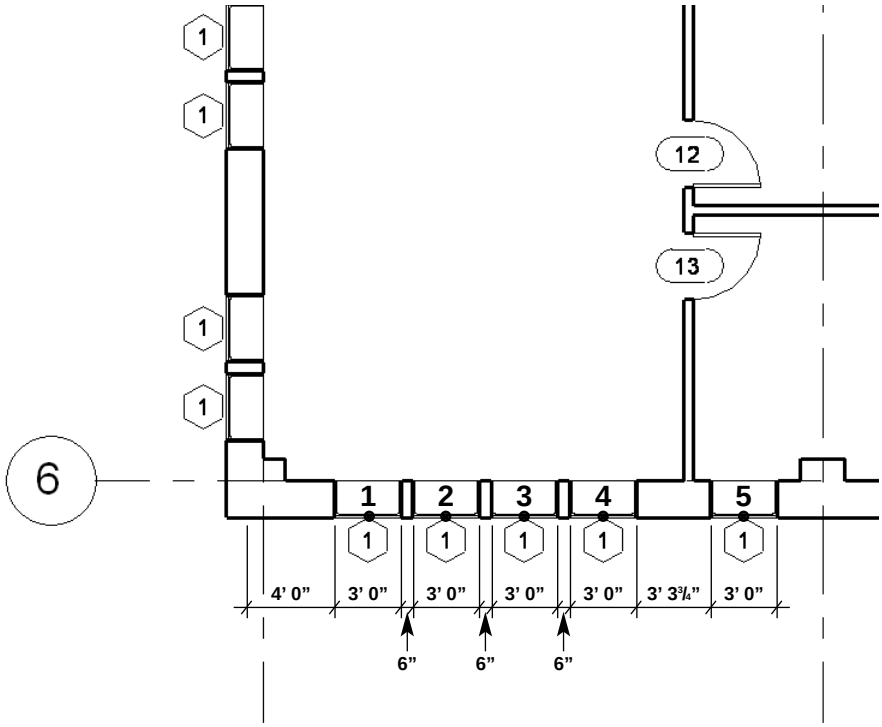
8. Place the windows in the exterior wall, as shown in the figure below (*points 17-20*).



Add Windows to the South Exterior Wall

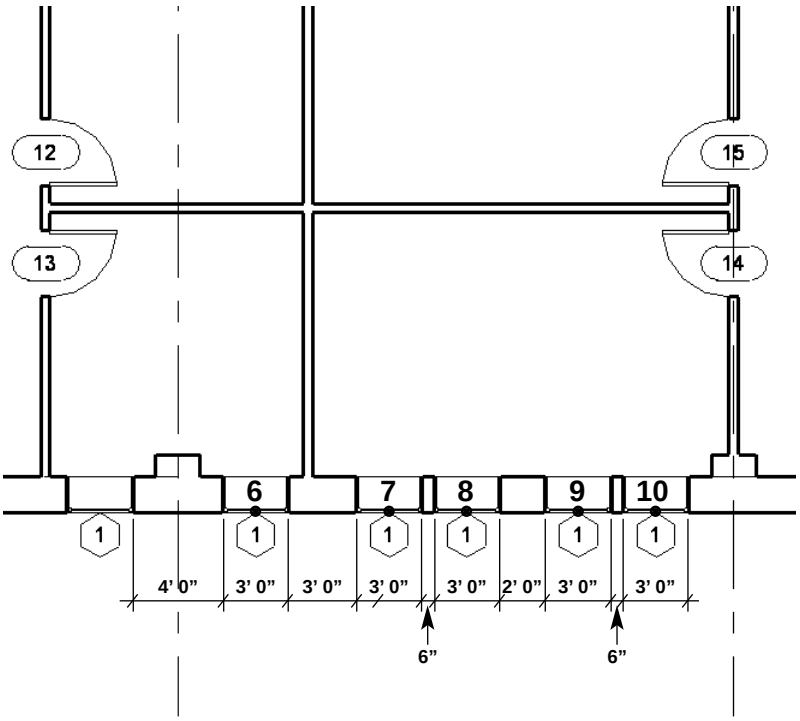
1. Use the scroll bars to pan the model to the right until the area between grid lines **6-A** and **6-B** appears in the view window.

2. Place the windows in the exterior wall, as shown in the figure below (*points 1-5*).



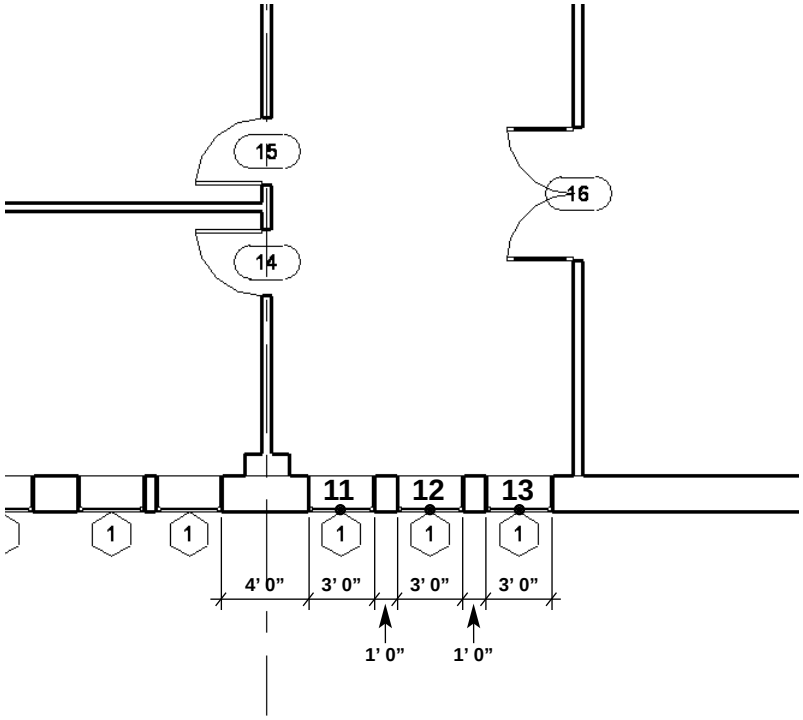
3. Use the scroll bars to pan the model to the right until the area between grid lines **6-B** and **6-C** appears in the view window.

4. Place the windows in the exterior wall, as shown in the figure below (*points 6-10*).

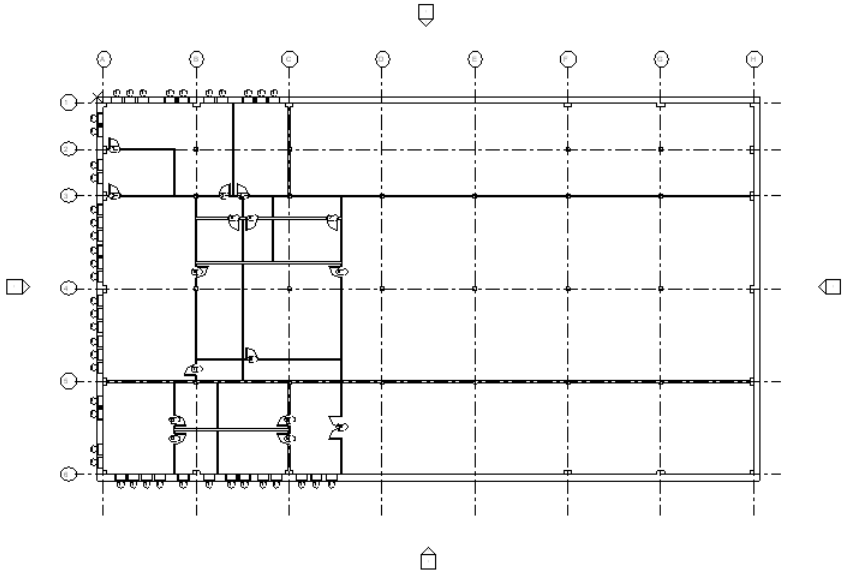


5. Use the scroll bars to pan the model to the right until the area between grid lines **6-C** and **6-D** appears in the view window.

6. Place the windows in the exterior wall, as shown in the figure below (*points 11-13*).



7. Use the **Zoom To Fit** command to fit the view. The drawing appears as shown in the figure below.



8. Choose **File > Save** from the Revit Building menu bar to save your changes to the project.

9. This concludes the exercise. Choose **File > Exit** from the Revit Building menu bar to exit Revit Building.