Practice 5a
Sketch and Edit Elements

Practice Objective

- Use modify tools and drawing aids.

In this practice, you will use a variety of ways to select elements, use the Filter dialog box to only select one type of element, select only elements of one type in the view, and use the Type Selector to change the type. You will then modify element locations using temporary dimensions, as shown in Figure 5–23.
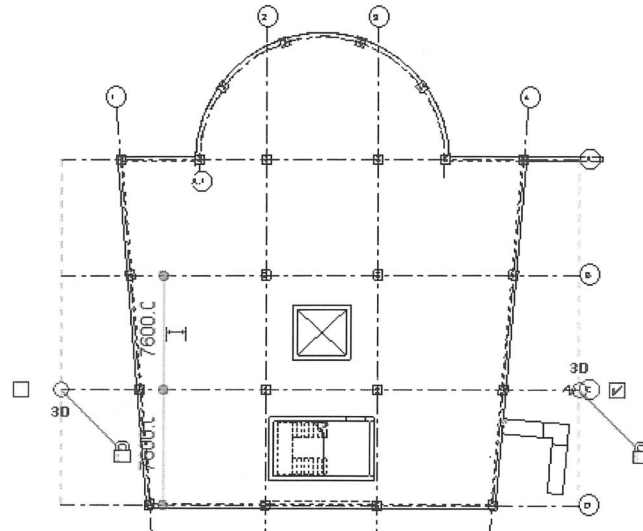
Figure 5–23

Task 1: Select elements.

1. Open **Structural-Select-M.rvt** from the practice files folder.

2. The file should automatically open to the **Structural Plans: Level 1** view.

3. Create a selection window around the building by selecting a point just outside the upper-left corner of the building and, while continuing to hold the left mouse button, drag the mouse toward the lower-right corner and click to select the second point, as shown in Figure 5–24.
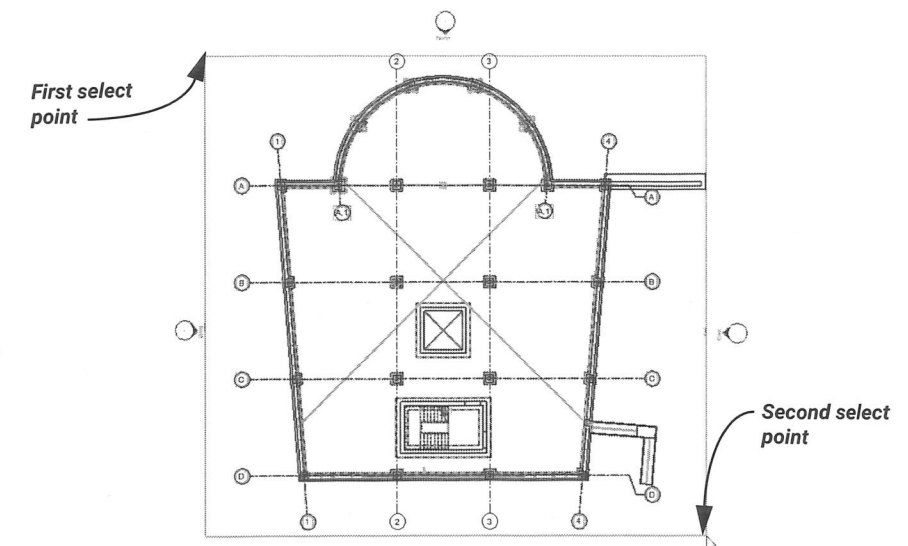
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First select point

Second select point

Figure 5–24

4. All of the elements inside the window are selected and those outside the window are not selected. Press <Esc>.

5. Select the building again, but this time use a crossing window by selecting a point just outside the upper-right corner of the building and, while continuing to hold the left mouse button, drag the mouse toward the lower-left corner, as shown in Figure 5–25. All of the elements inside and touching the window are selected.
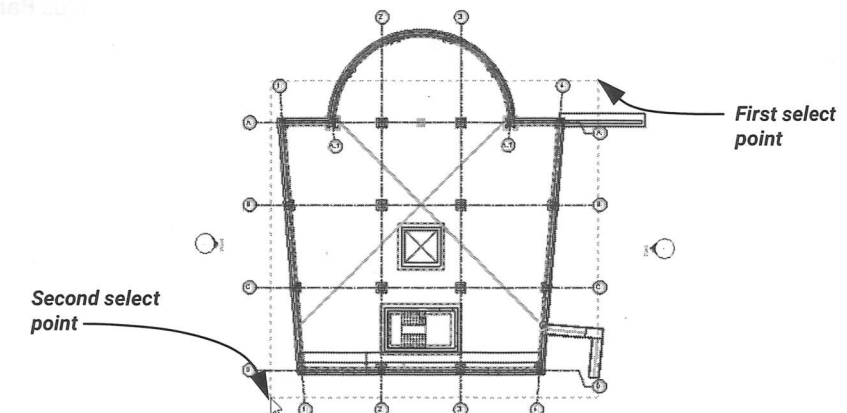
First select point

Second select point

Figure 5–25

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6. In the Status Bar, click ▽ (Filter).

7. In the Filter dialog box, shown in Figure 5–26, review the selected element categories.

   Note: The numbers here and in the next steps might be slightly different depending on your selection.
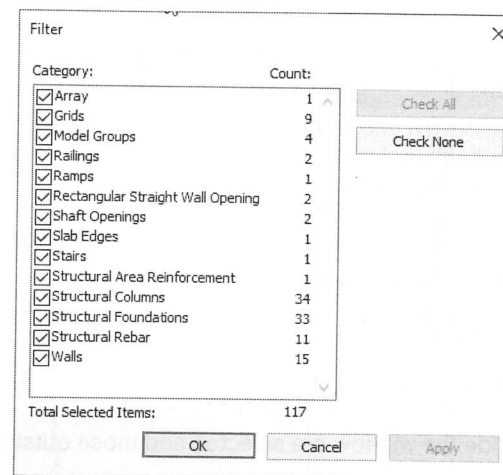

Figure 5–26

8. Click **Check None**.

9. Select only the **Structural Columns** category and click **OK**.

10. The total number of structural columns in the selection set displays in the Status Bar, as shown in Figure 5–27.

Figure 5–27

11. In Properties, the display indicates that multiple families are selected.

12. Click in an empty space in the view to clear the selection.

13. Zoom in on the lower-left corner of the building and select one structural column, as shown in Figure 5–28.
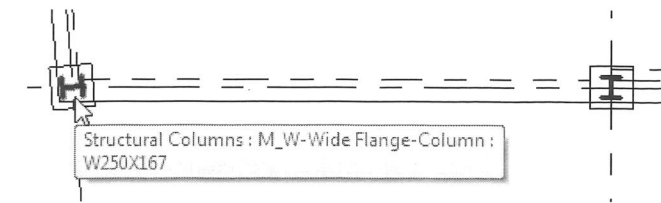

Figure 5–28

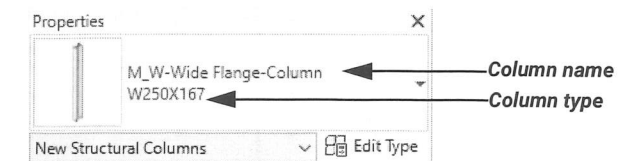14. In the Type Selector, the column name and type are displayed, as shown in Figure 5–29.

Figure 5–29

15. In the view, right-click, expand **Select All Instances**, and select **Visible in View**, as shown in Figure 5–30.
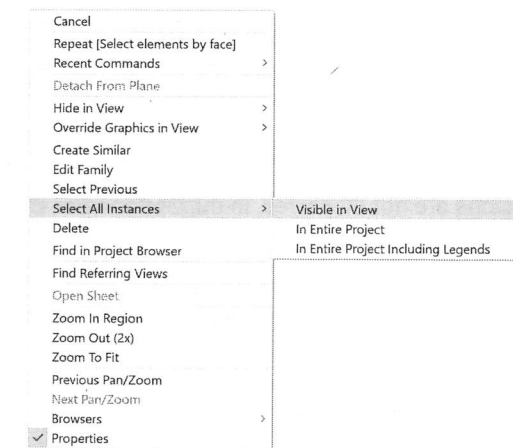

Figure 5–30

16. The total number of this type of column displays in the Status Bar beside the Filter and in Properties.

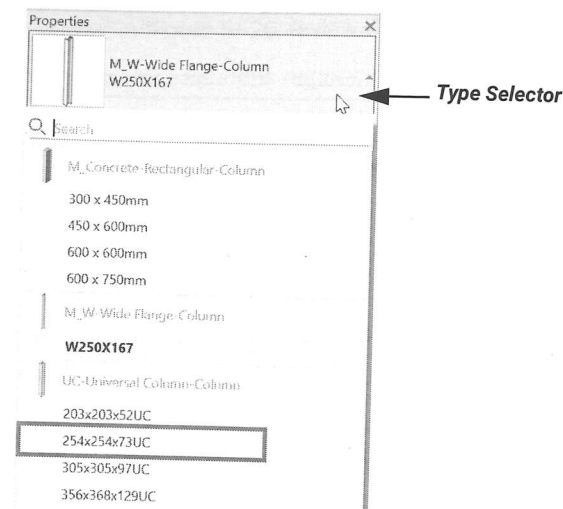17. Expand the Type Selector, as shown in Figure 5–31, and select **UC-Universal Column-Column 254x254x73UC**.

Figure 5–31

18. The view regenerates and the selected columns are updated to the new type. Press <Esc> to release the selection set.

Task 2: Use temporary dimensions.

1. Zoom out to see the entire building.

2. Select **grid line C**.

3. If the temporary dimensions are not displayed, in the Options Bar, click **Activate Dimensions**.

4. The temporary dimensions are automatically connected to the closest structural elements.

5. Use the **Move Witness Line** controls on the temporary dimensions and move them to the nearest grid lines, as shown in Figure 5–32.
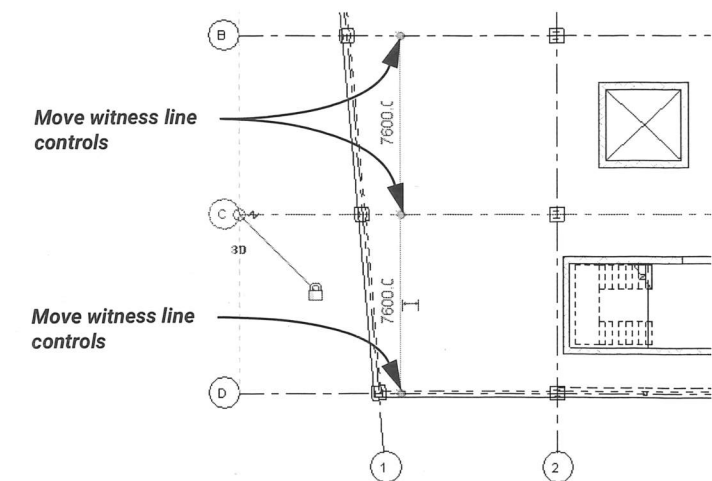

Figure 5–32

6. Click ⊟ (Make this temporary dimension line permanent).

7. Click in an empty space in the view to release the selection. The new dimensions are now part of the view.

8. Select **grid line C** again.

9. Click **Activate Dimensions,** if needed.

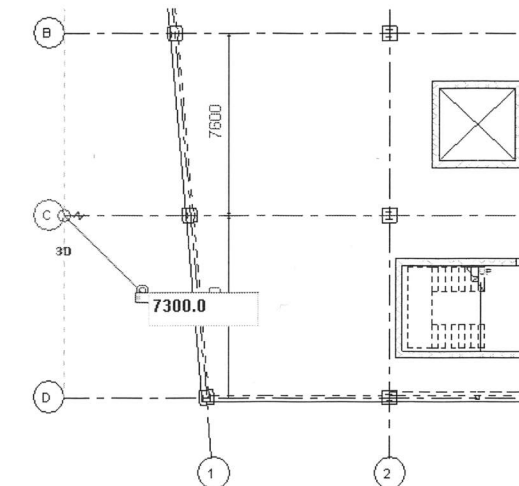10. Select the lower dimension text and change it to **7300mm**, as shown in Figure 5–33. Press <Enter>.

Figure 5–33

- The model regenerates and the percentage of completion is displayed in the Status Bar, as shown in Figure 5–34. This change is being made to the grid line and throughout the model, wherever elements touch the grid line.

Cancel ———— **4%** | Processing : Regenerating

Figure 5–34

11. Save and close the project.

End of practice