

Practice Exercise 3

Family Types & Annotations



Learning Objectives that are covered within this practice exercise are:

- 2.1a Configure family types
- 3.1a Dimensions

Video resources that may help with this challenge exercise are:

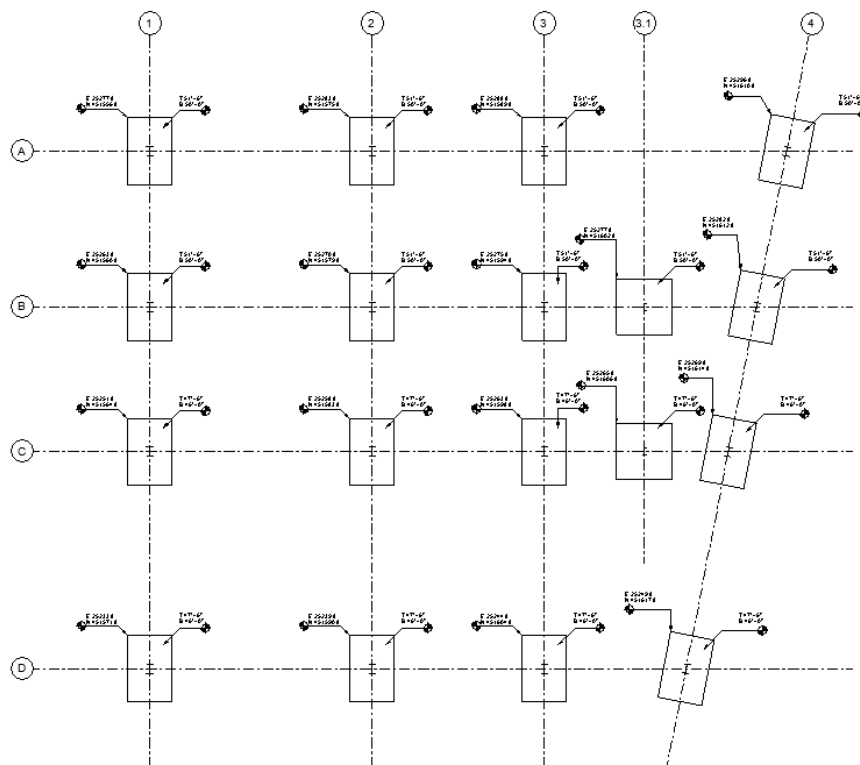
- 021 - Manage family categories and types.mp4

Criteria: In this practice exercise you edit an isolated foundation, create a new family type, and then detail the foundation with spot levels and spot coordinates.

The following steps need to be completed:

1. From the Practice Exercise folder in the Datasets, open the Revit model Practice Exercise 3.rvt. The model will open with the Top Of Foundation L1 plan active.
2. Create a new family type for the Structural Foundations: Footing-Rectangular with the dimensions of 60" x 60" x 18".
3. Replace the footings on Grid intersections 3.1-B and 3.1-C with your new 60" x 60" x 18" foundation.
4. Add spot levels to each foundation displaying both the top and bottom levels.
5. Add spot coordinates at the top-left corner of each pad foundation.

The finished model should look like the image shown below.

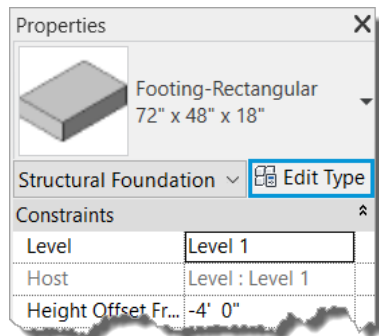


Practice Exercise 3

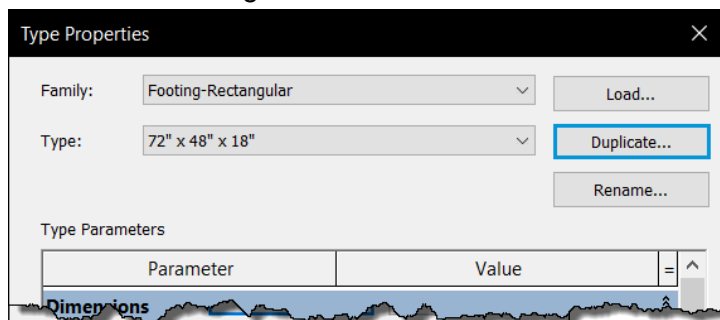
Family Types & Annotations

Solution:

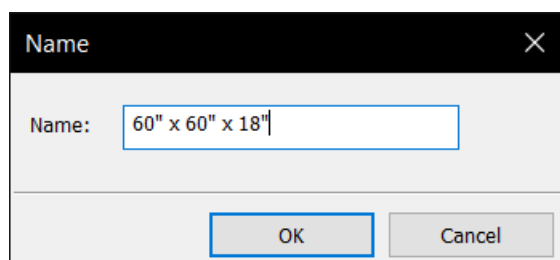
1. First, create a new family type for the foundation pads located at grid intersection 3.1-B and 3.1-C.
 - a. Select the pad foundations at grid 3.1-B and 3.1-C. On the Properties Palette, click Edit Type as shown below.



- b. In the Type Properties dialog, click Duplicate as shown in the image below.

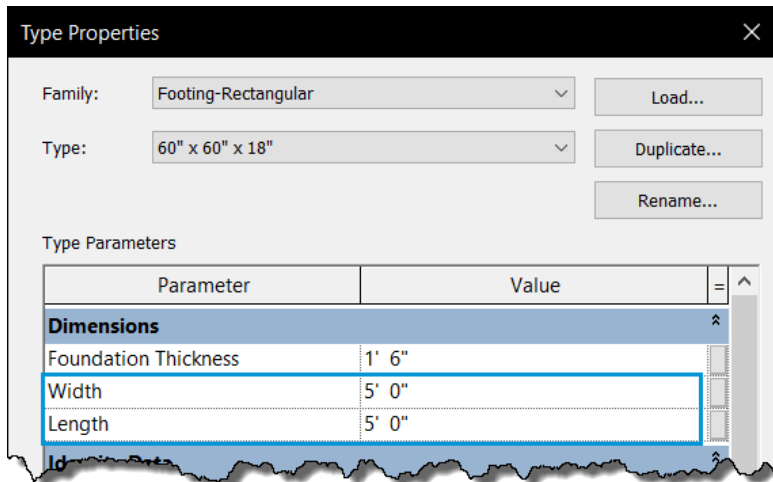


- c. In the Name dialog, enter 60" x 60" x 18". Click OK.



- d. In the Type Properties dialog, set the Width and Length to 5' 0" as shown below.

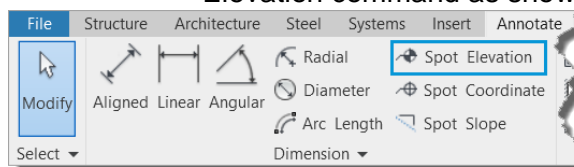
Practice Exercise 3 Family Types & Annotations



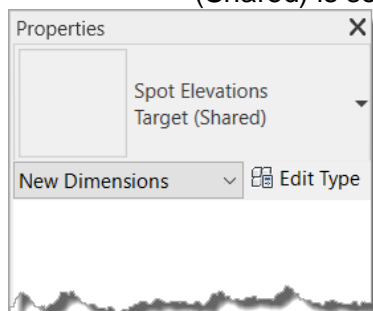
- e. Click Ok. Note that both selected pad foundations have now been updated to the new family type.

2. Next, add Spot Elevations to the pad foundations to detail both the top and bottom levels.

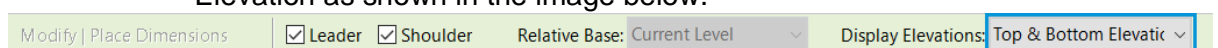
- a. On the Annotate ribbon in the Dimension panel, click the Spot Elevation command as shown below.



- b. In the Properties Palette, ensure that Spot Elevations Target (Shared) is set as the current family and type.



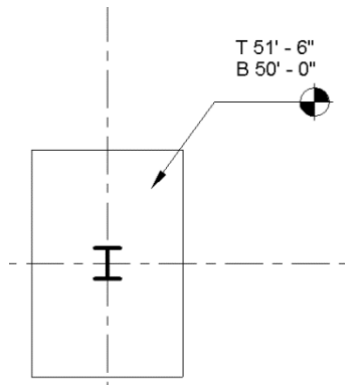
- c. This family type has been configured to read elevations from the survey point and will display both the top and bottom levels. On the Options Bar, set the Display Elevations to Top & Bottom Elevation as shown in the image below.



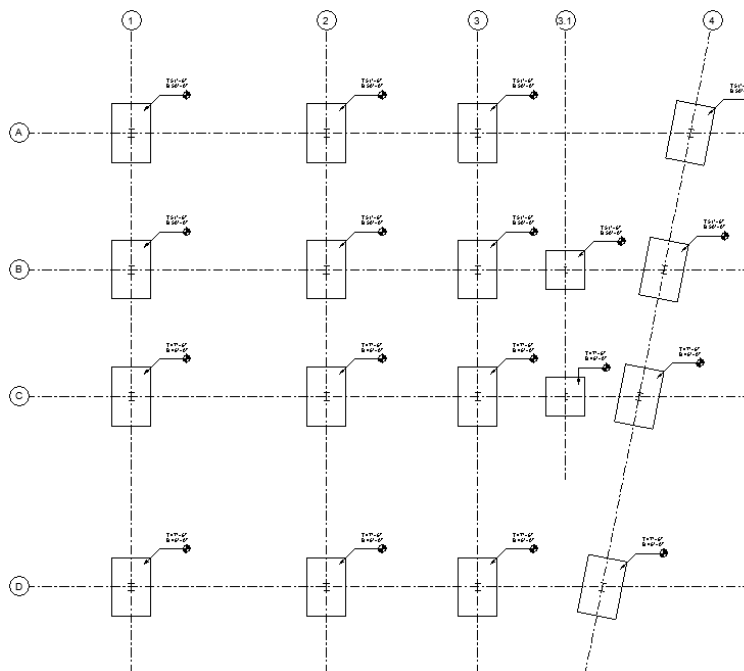
- d. Place a spot level on the pad foundation on the grid intersection A-1.

Practice Exercise 3

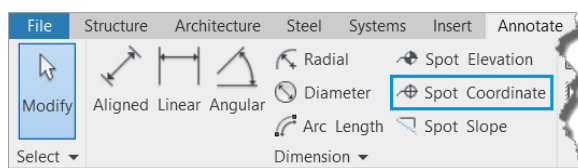
Family Types & Annotations



To keep the placement consistent, you can copy the spot level from A-1 to the other foundation pads using multiple copy. Your plan should now look like the below image. (Note: You can only copy from one type to the same type and rotation.)



3. You now add spot coordinates to the top-left corner of each foundation pad.
 - a. On the Annotate ribbon in the Dimension panel, click Spot Coordinate.

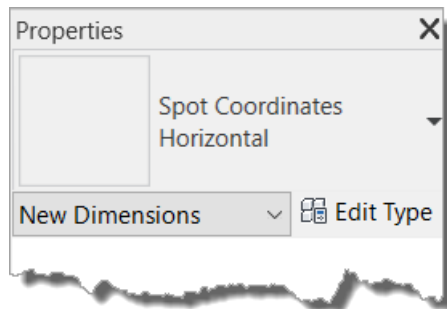


Practice Exercise 3

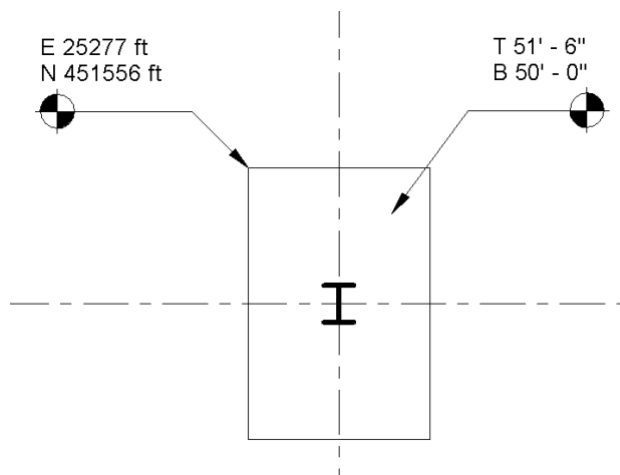
Family Types & Annotations



- b. In the Properties Palette, ensure that Spot Coordinates Horizontal is set as the current family and type.



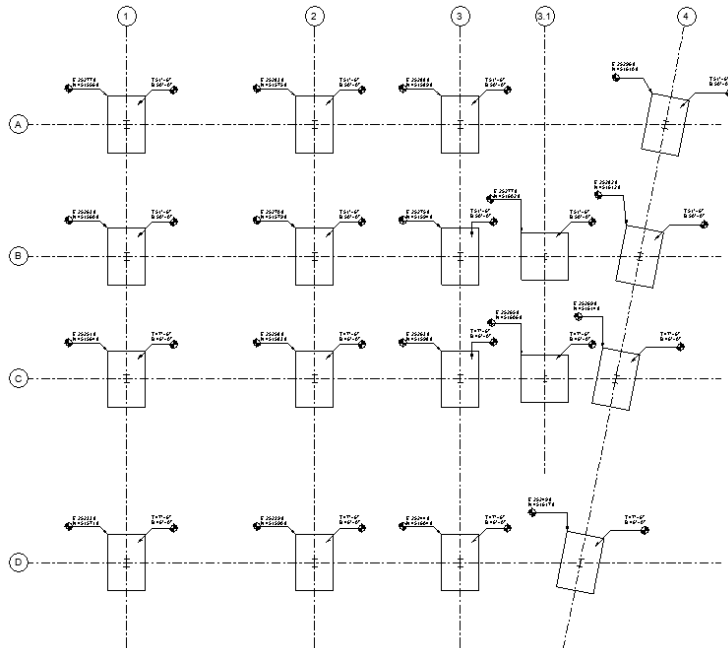
- c. Place a spot coordinate on the pad foundation on the grid intersection A-1 as shown in the image below.



4. Use a similar technique to copy the spot coordinate to the remaining pad foundations. Note that you may need to use the grips and drag the corners and ends to avoid clashes with other items. Your plan should now look like the image shown below.

Practice Exercise 3

Family Types & Annotations



End of exercise