# Special Parameters

Modified on: Mon, 22 Jun, 2020 at 11:28 AM

Smart Connections can read information from Host or connected element parameters and write them into inserted elements. Also you can read distance from insert point to connected element.
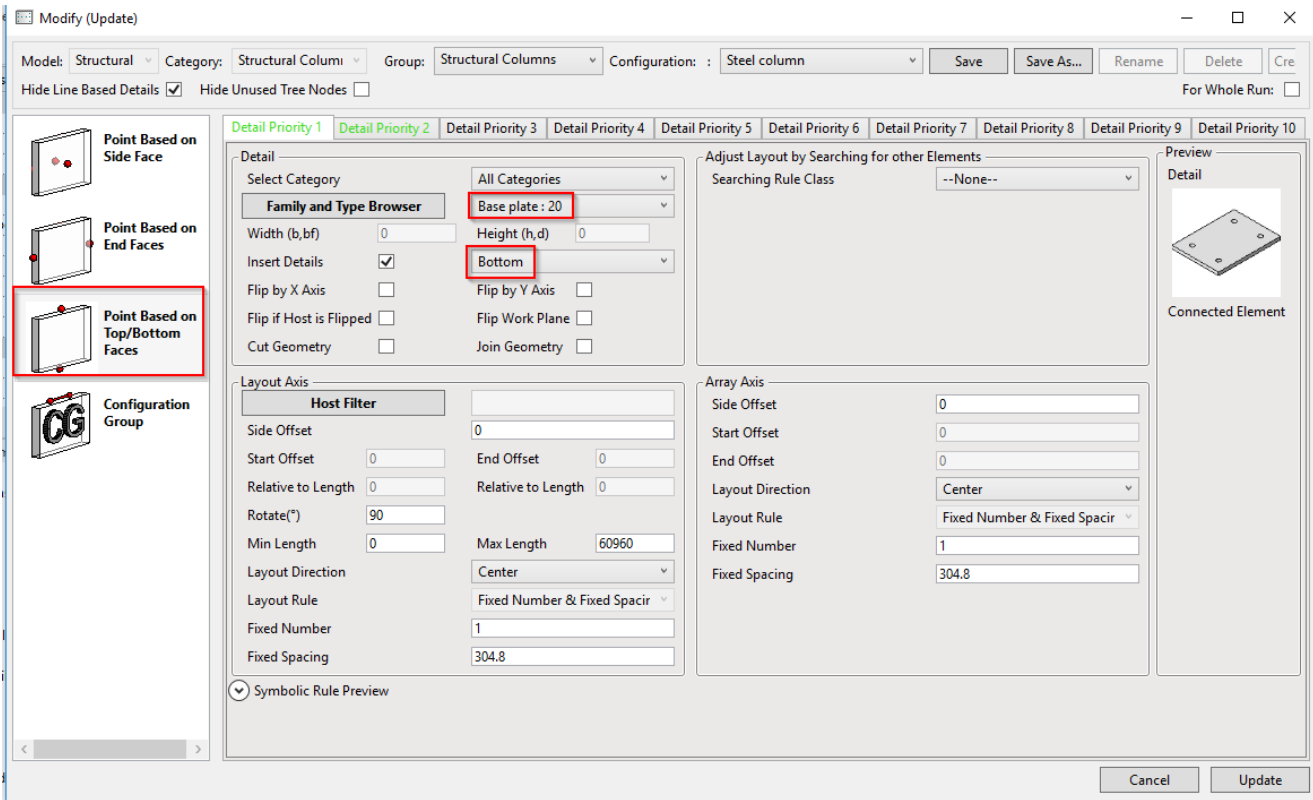
For that you can use parameters in your Families with some special rules.

1. To read information from Host element, use #.

Example:
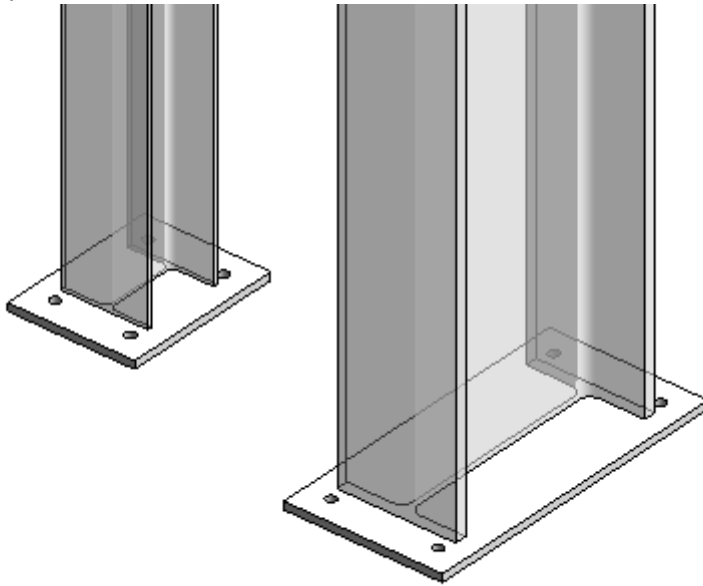
A. To insert plate at the bottom of the column, use simple configuration to place plate Family at the center of bottom face of column.

B. So that the plate automatically adjusts to the size of the column, you need to read column size parameters and use them in your connection plate.

In the Family that you want to insert with Smart Connections, create a parameter following rules like these:
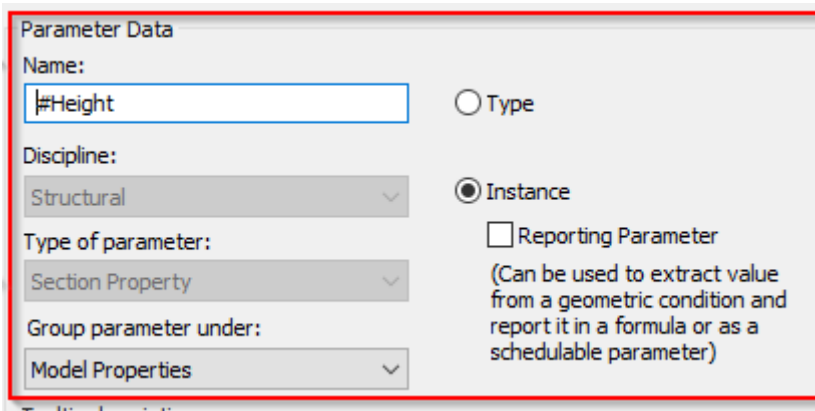
Use the "#" symbol in front of the parameter name.
Name, Discipline and Type of Parameter - should be exactly the same as it is in the Host element.
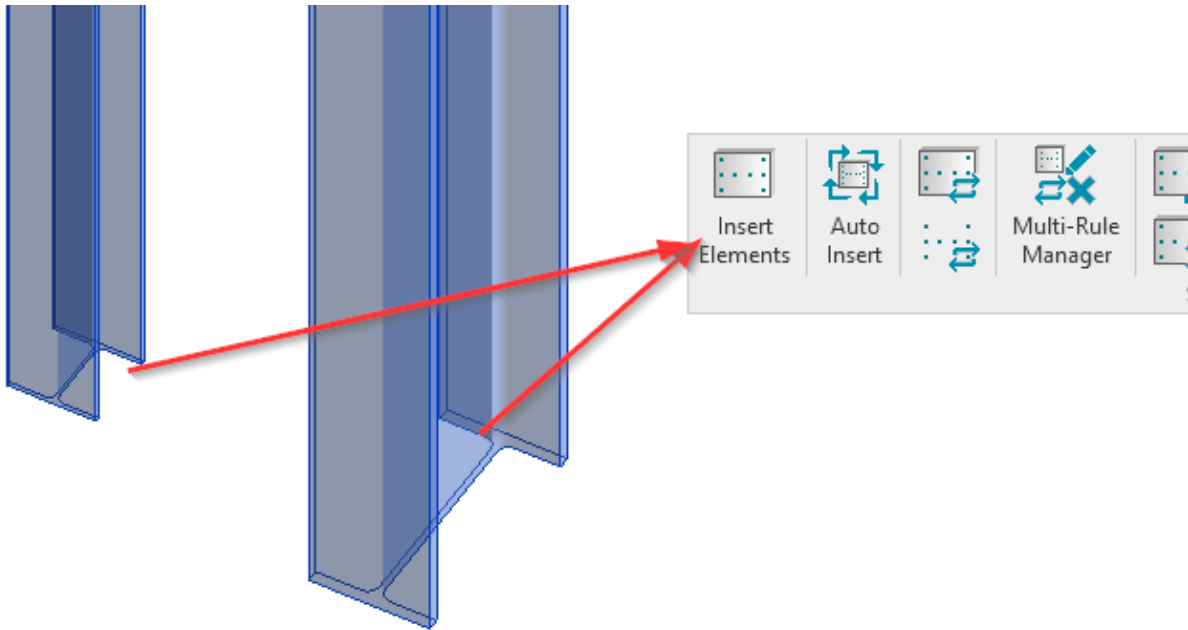**Instance** - it must be Instance parameter.
**Group parameter under** - it is necessary to group it under *Model Properties*

This parameter can be used to define element position, offsets, size, used in formulas of other parameters, etc.
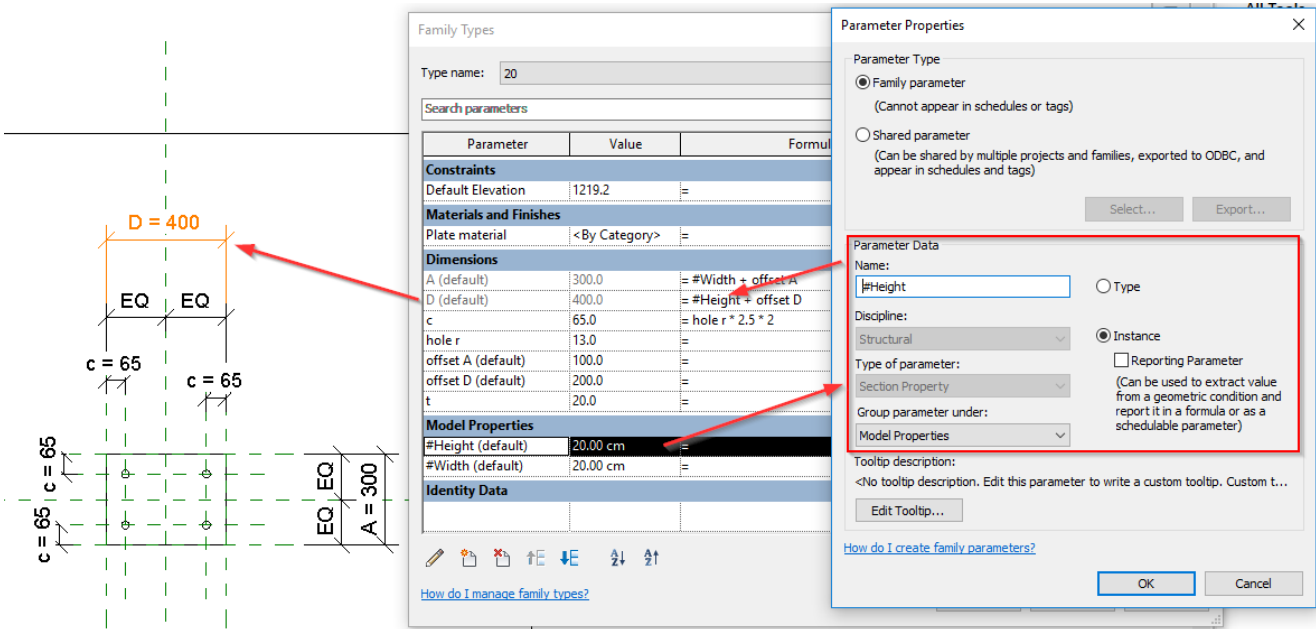
Executing Insert, Update, Modify, Update Parameters commands will copy information from Hosts parameter to inserted element's parameter.
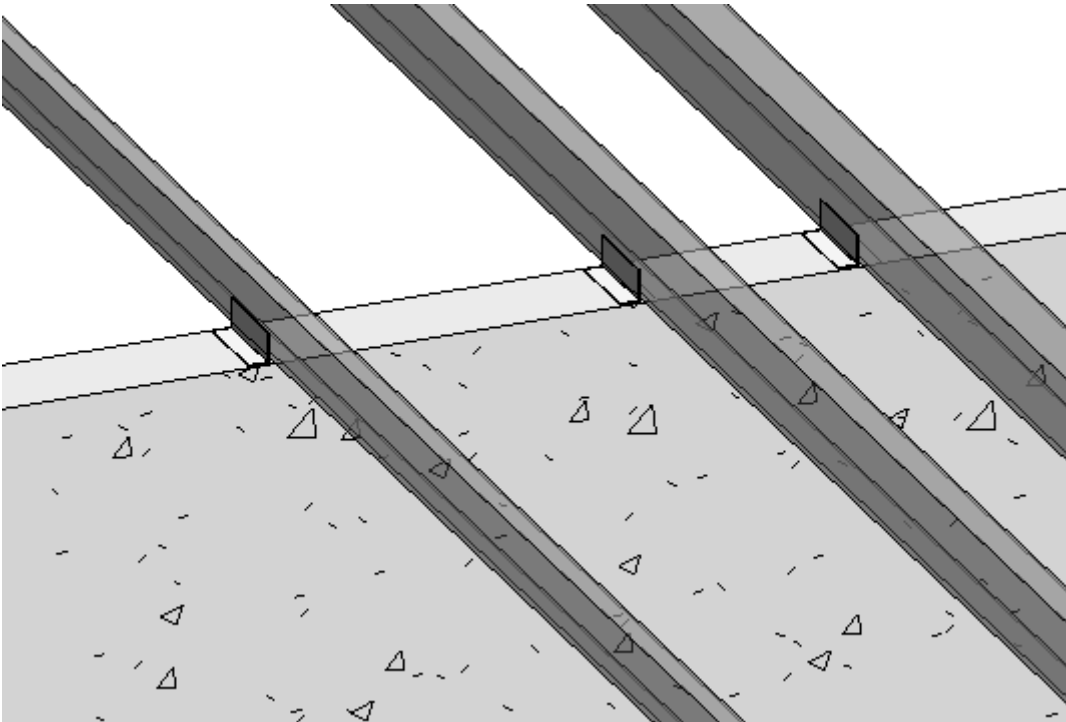
For example, size of plate is automatically changed based on the size of the column:
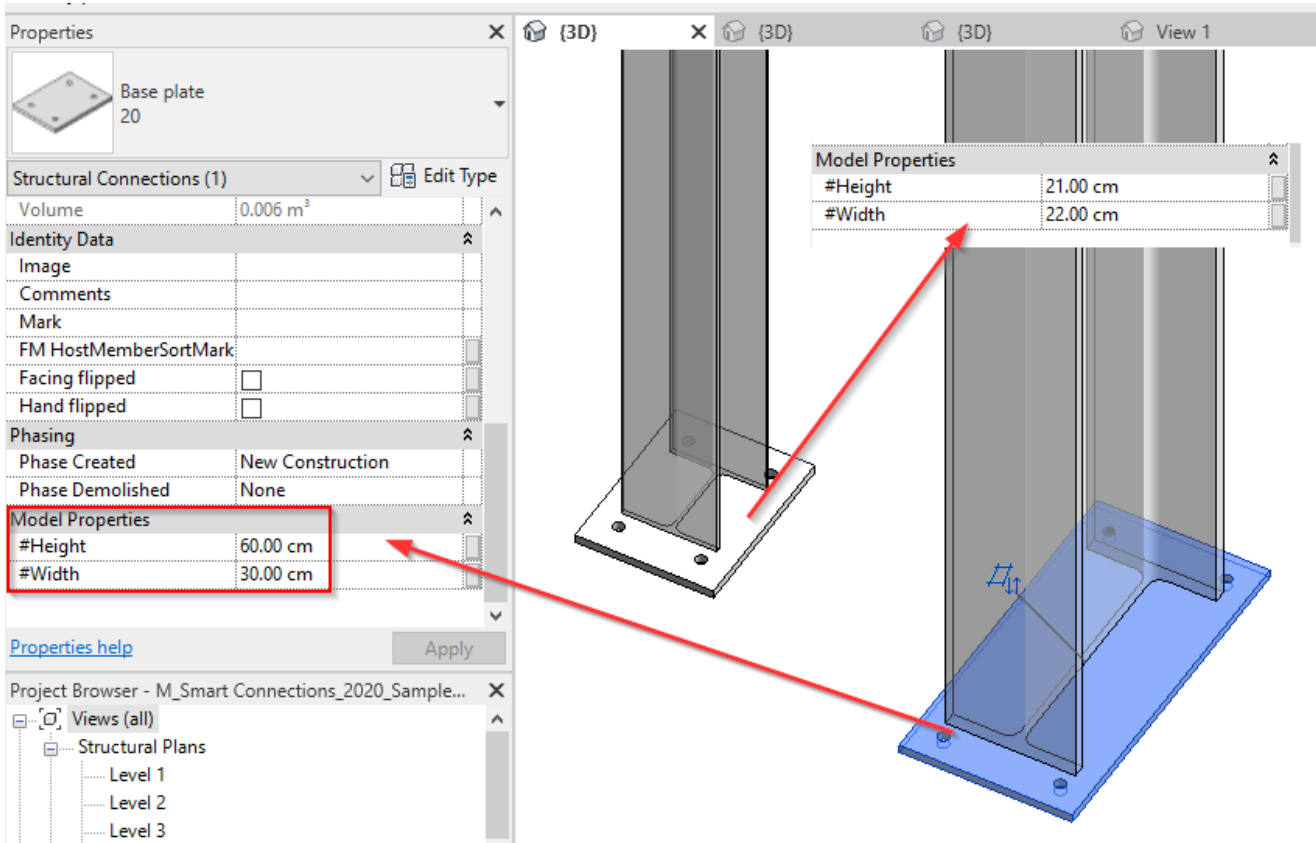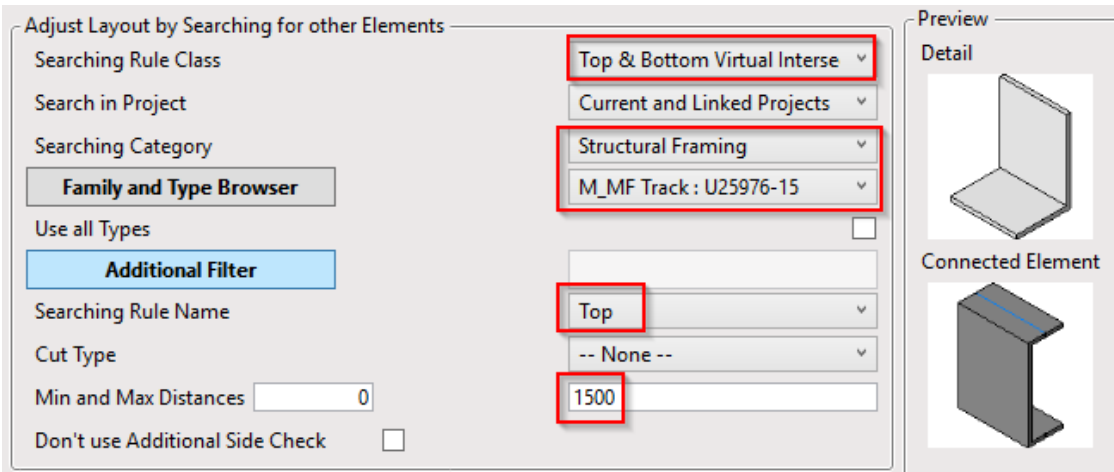
2. To read information from connected element, use ##.
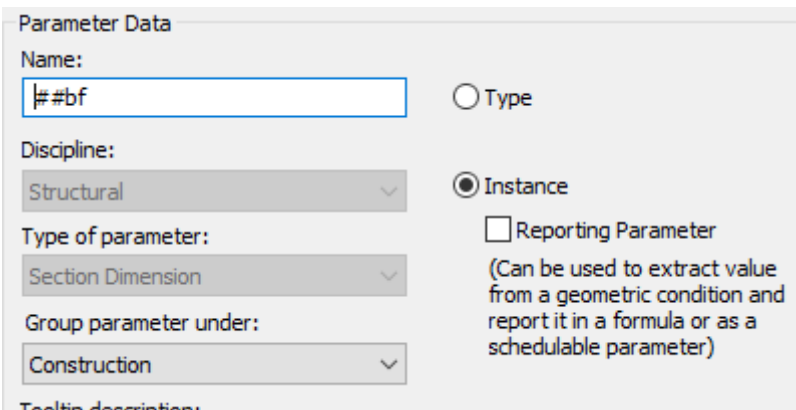
Example:

A. Insert connection element only at the positions of Virtual intersection of Structural Framing and Wall. To do that in Smart Connections configuration, use Adjust Layout rule:

B. Move connection element to the side of Structural Framing automatically. To do that, in connection Family create parameter using rules like these:
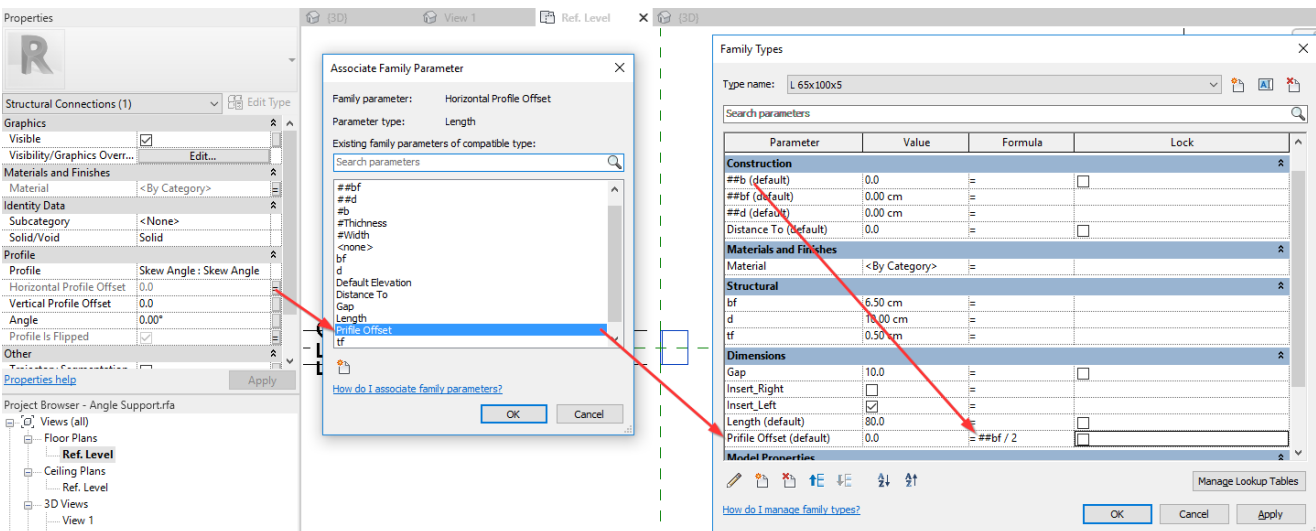

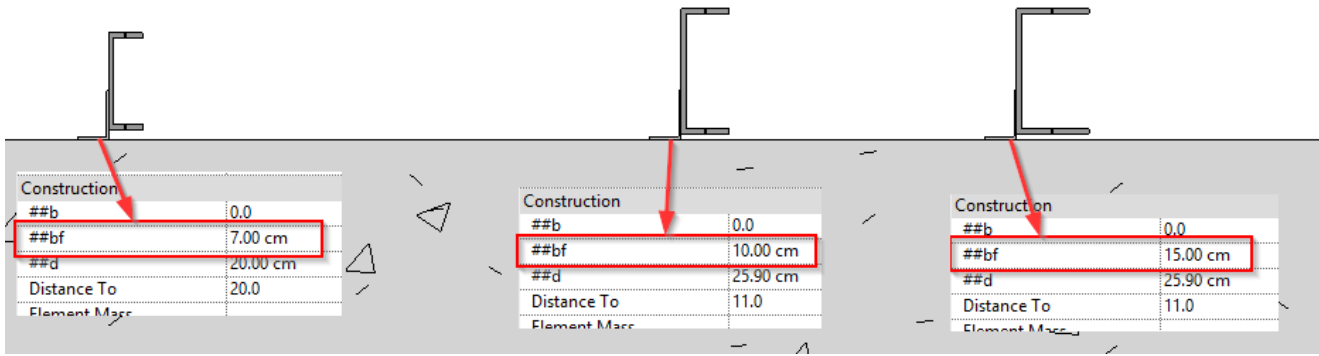**Use the "##" symbols** in front of parameter name.

Name, Discipline and Type of Parameter - should be exactly the same as is in the Host element.

Instance - it must be Instance parameter

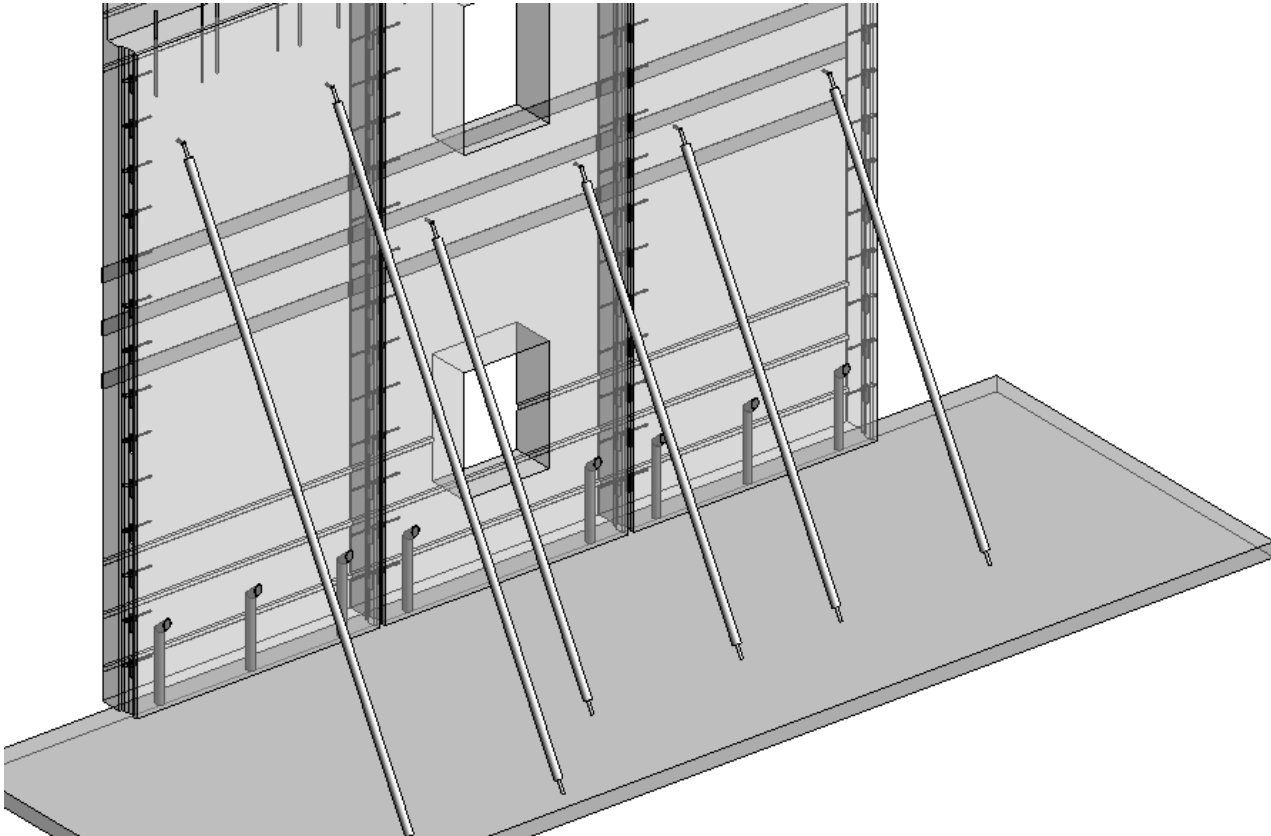**Group parameter under** - it is necessary to group it under *Construction*.

In this case **##bf parameter** is created and used to offset connection element from insert point.
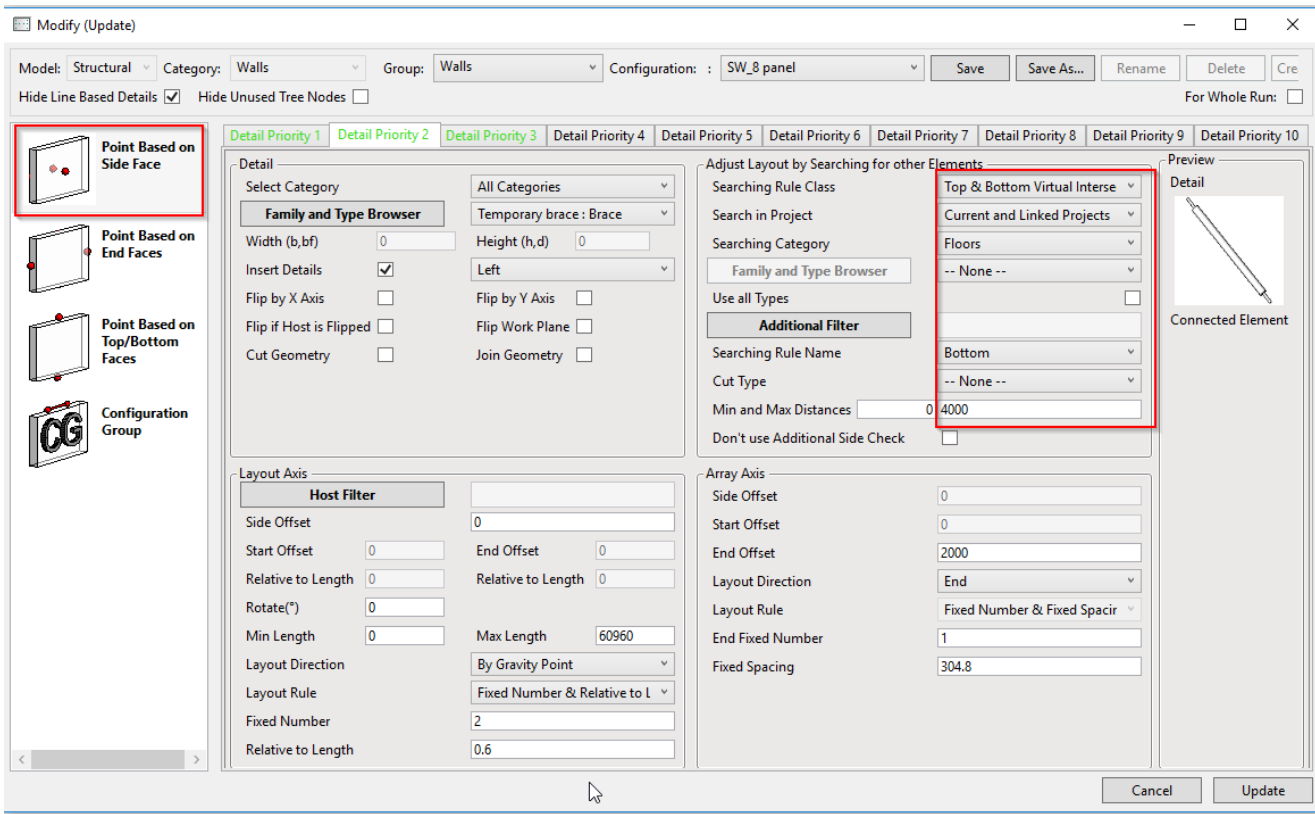
3. To read distance to virtually intersected element, use 'Distance To'.

Example:

A. To insert supporting elements on a wall, use simple configuration to insert them, but also use Adjust Layout distance and search for the Floor, so your Distance To parameter would get the correct value.

B. Length of support elements should automatically be updated based on the distance to the Floor.

Distance To - add parameter with exact name to your insert Family
Instance - it must be Instance parameter
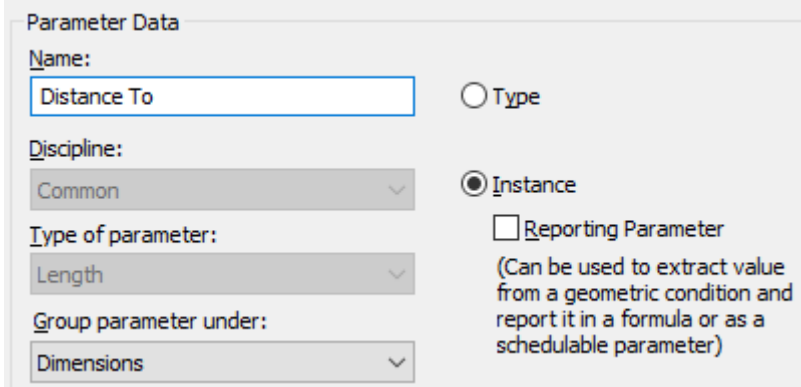
Family Types

Type name: Brace

Search parameters

Parameter	Val
Constraints	
Default Elevation	4' 0"
Dimensions	
Distance To (default)	4' 0"
a	0' 5"
angle (default)	30.00°
horizontal dsti from the wall (default)	2' 3 91/128"
Identity Data	

Parameter Properties

Parameter Type

◉ Family parameter

(Cannot appear in schedules or tags)

◯ Shared parameter

(Can be shared by multiple projects and families, exporte appear in schedules and tags)

Select...

Parameter Data

Name:

Distance To

◯ Type

Discipline:

Common

◉ Instance

Type of parameter:

Length

☐ Reporting

Group parameter under:

Dimensions

(Can be use from a geom report it in a schedulable

Tooltip description:

<No tooltip description. Edit this parameter to write a custom