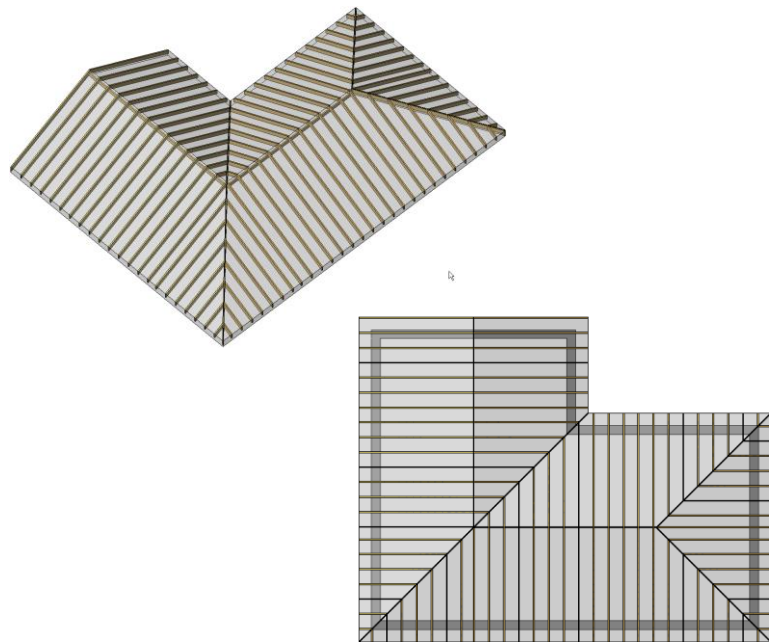
An abstract, three-dimensional geometric graphic representing a roof structure. It features a complex arrangement of white wireframe lines forming a skeletal frame, overlaid on a solid, translucent blue volume that mimics the shape of a roof. The graphic is positioned in the upper right quadrant of the image, set against a background of a modern, empty parking garage with concrete pillars and a blue-tinted floor.

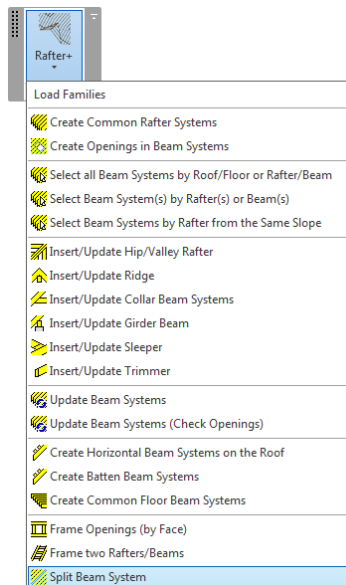
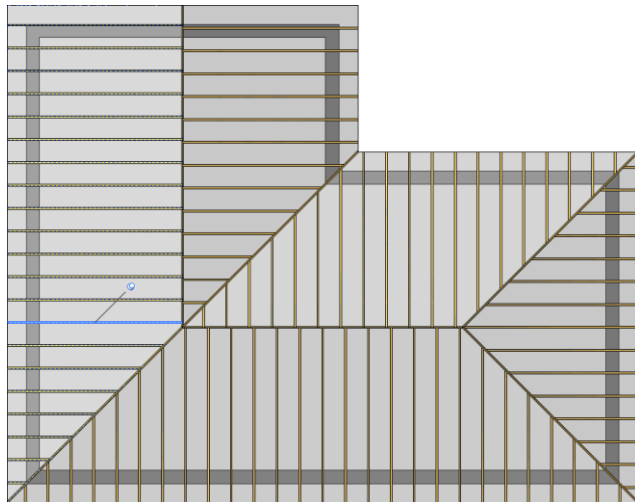
WOOD FRAMING RAFTER+ Split Beam Systems

Split Beam System



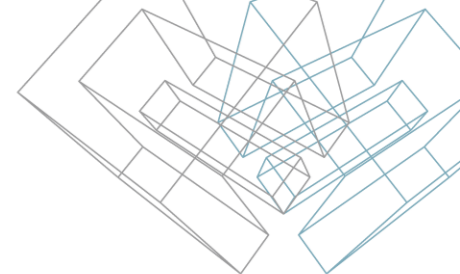
- Revit doesn't have any possibility to control a distance of the first and last rafter spacing of Beam System. It is the main reason to use the Split beam system function - it aligns rafters in adjacent slopes and sets offset from the slope side.
- It's important to split beam systems in the right way. Take openings into consideration and try to keep hip/valley and ridge boundaries of the beam system connected.
- Use the **Split Beam System** function only when all roof framing is almost finished, hereby you will avoid some inaccuracies if you will frame the roof later.

Split Beam System



- Select a beam system and one rafter or beam, which will define a split in the beam system.
- Run the **Split Beam System** function from the menu.

Split Beam System



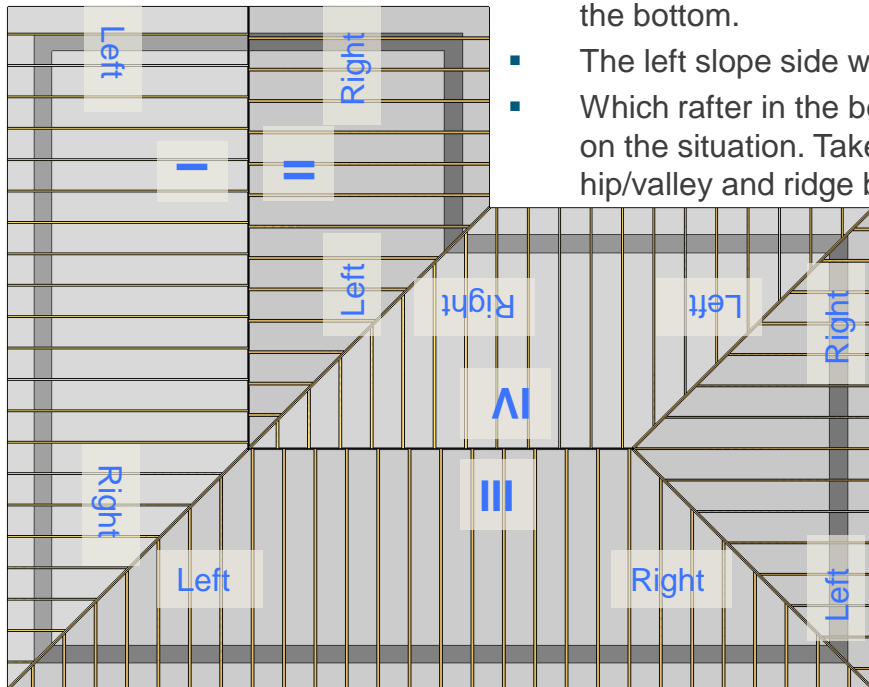
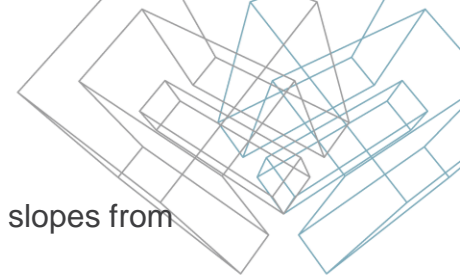
Split Beam System

Define new beam positioning:

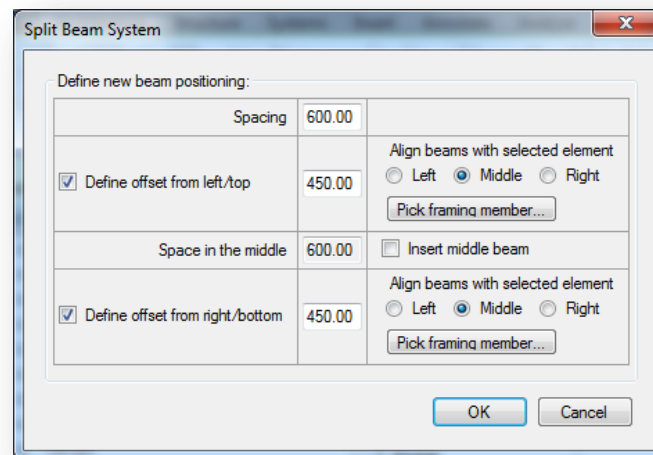
Spacing	600.00	
<input checked="" type="checkbox"/> Define offset from left/top	450.00	Align beams with selected element <input type="radio"/> Left <input checked="" type="radio"/> Middle <input type="radio"/> Right <input data-bbox="569 540 782 562" type="button" value="Pick framing member..."/>
Space in the middle	600.00	<input type="checkbox"/> Insert middle beam
<input checked="" type="checkbox"/> Define offset from right/bottom	450.00	Align beams with selected element <input type="radio"/> Left <input checked="" type="radio"/> Middle <input type="radio"/> Right <input data-bbox="569 709 782 731" type="button" value="Pick framing member..."/>

- Change the *Spacing* distance between Rafters or Beams if necessary.
- Pay attention to default offset values in the initial window, because they are automatically set to the half-distance of rafter spacing.
- Tick options - *Define offset from left/top* or *Define offset from right/bottom* - provide the distance from the left/top or right/bottom side of beam system to the center line of the first rafter (beam) if necessary.
- *Space in the middle* value indicates space between split-beam systems. Tick the *Insert middle beam* option to insert an additional rafter or beam into the split between beam systems.
- On the right side, you see another option that helps to align beams with dormer frame. Then you have to indicate the aligning point, and Pick dormer frame.

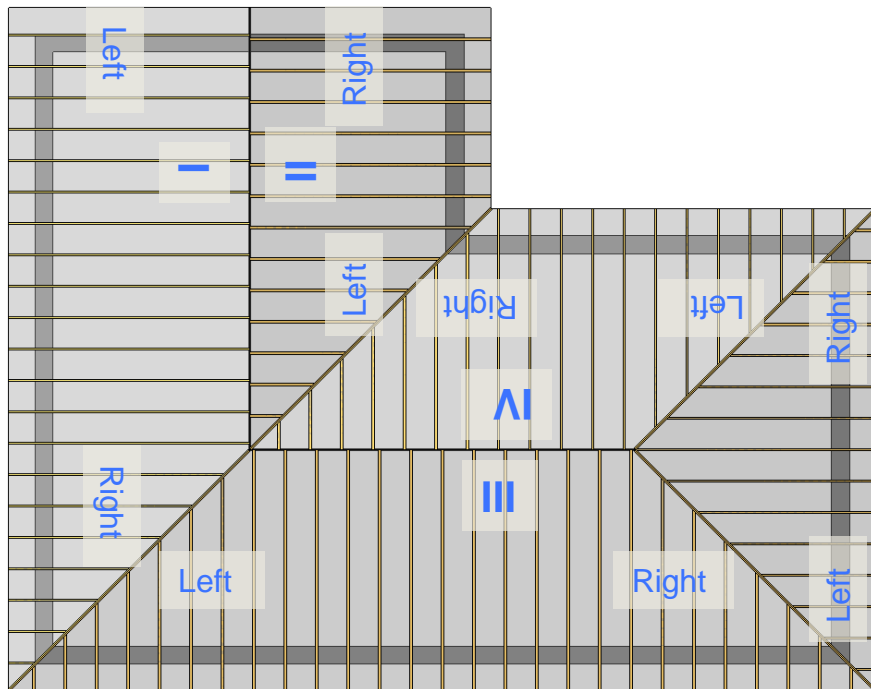
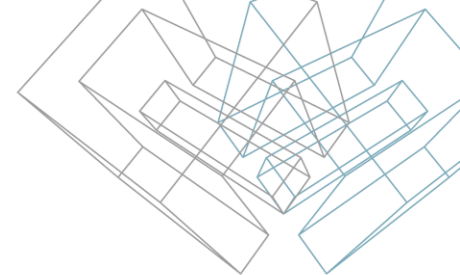
Split Beam System



- To determine Left and Right sides of a slope, look at the slopes from the bottom.
- The left slope side will be on the left and vice versa.
- Which rafter in the beam system must be selected for split, depends on the situation. Take openings into consideration and try to keep hip/valley and ridge boundaries of the beam system connected.

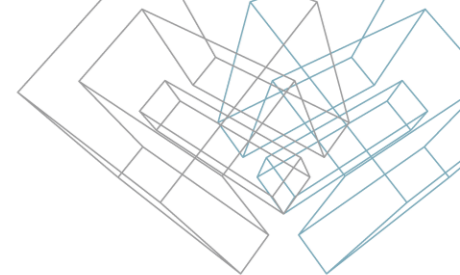


Split Beam System

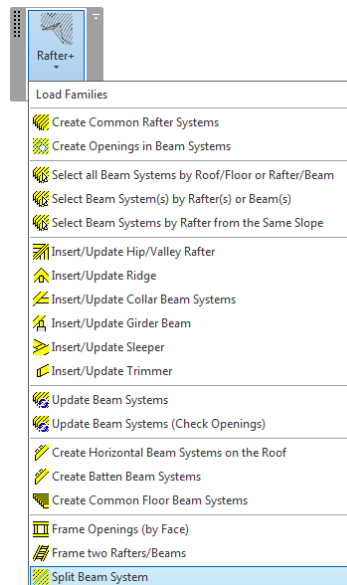
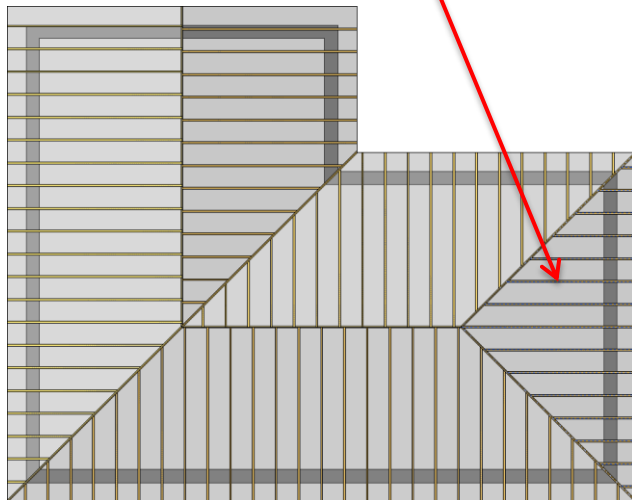


- The simplest example of the **Split Beam System** function can be shown with the triangle slope, so we will begin with it.
- Then we will split slope I and slope II, because splitting slopes with gable ends is the best practice.
- After that, we will split hipped end slopes III and IV.

Example (triangle)



Selected
triangle beam
system

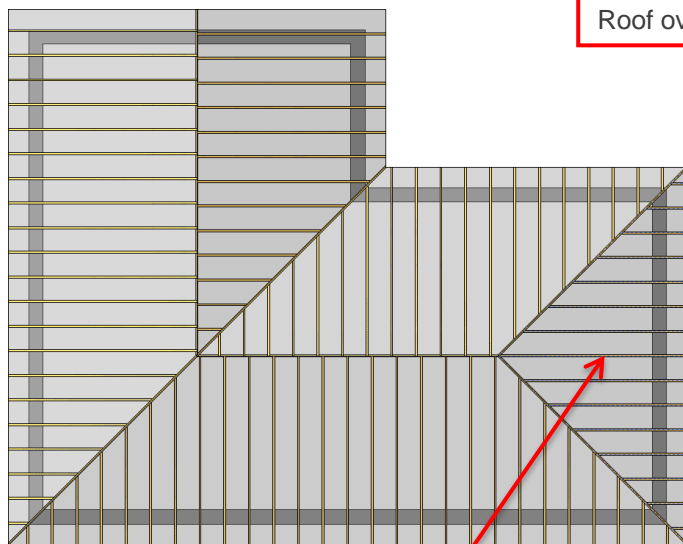


- Select the triangular-shaped rafter (beam) system.

NOTE: if you don't select any single rafter of the triangle beam system, then the split will be done in the middle of the beam system.

- Run the **Split Beam System** function from the menu.

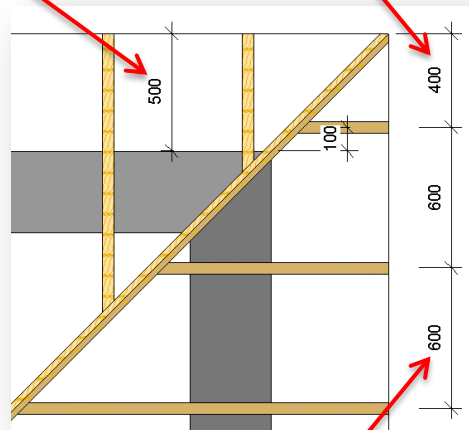
Example (triangle before the split)



Selected triangle beam system

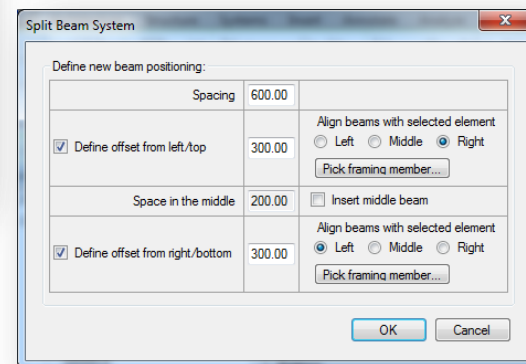
Roof overhang

Rafter offset from the slope right side

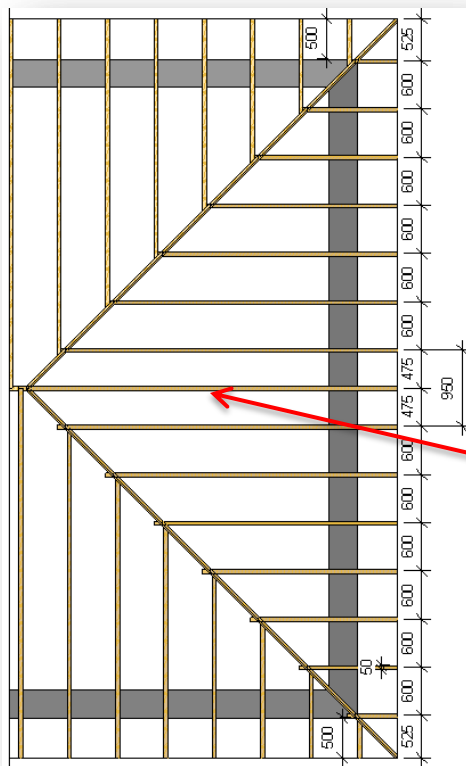


Rafter spacing

- Default 'Split Beam System' settings and the situation before the split.



Example (triangle split result)



Roof overhang

Rafter offset from the right side of the slope

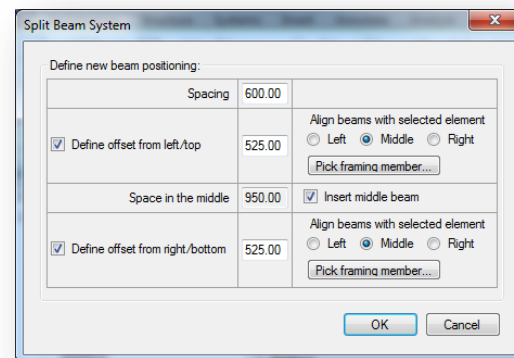
Rafter spacing

Rafter spacing

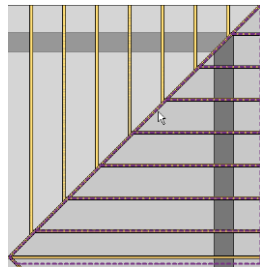
This rafter was additionally inserted

Rafter offset from the left side of the slope

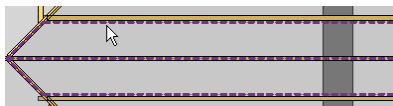
- 'Split Beam System' settings and the split result.
- The beam system is split into three parts.



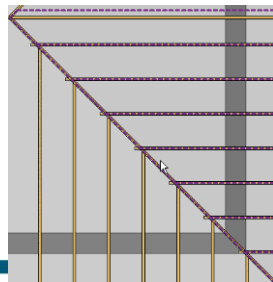
Example (triangle split result)



Right side

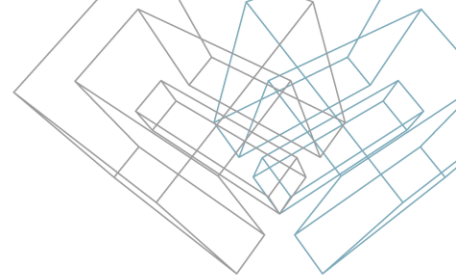


Middle

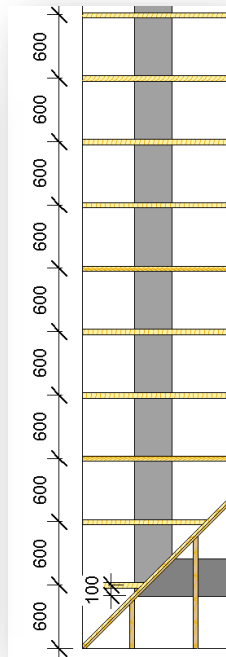
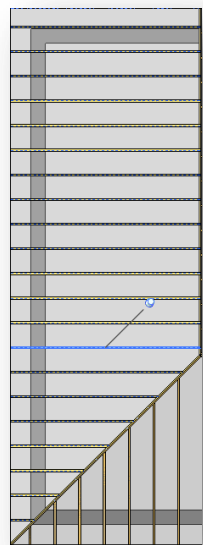


Left side

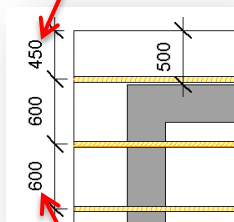
- Beam system is split into three parts – left part, right part and one additionally inserted rafter (beam) in the middle.
- Boundary lines of beam systems in two Hip Rafter positions are connected.
- After the spit of the rafter (beam) system, the **Insert/Update Hip/Valley Rafter** function will work well.



Example Slope I (before the split)

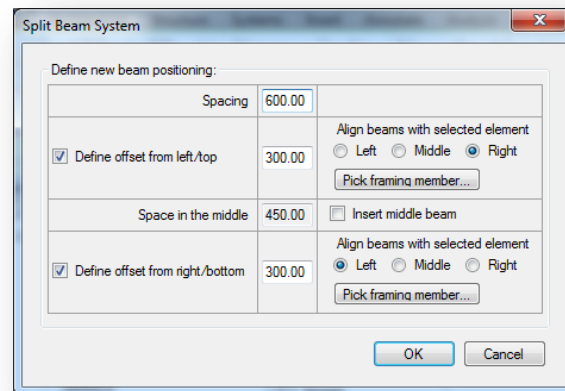


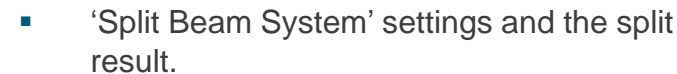
Rafter offset from the left side of the slope



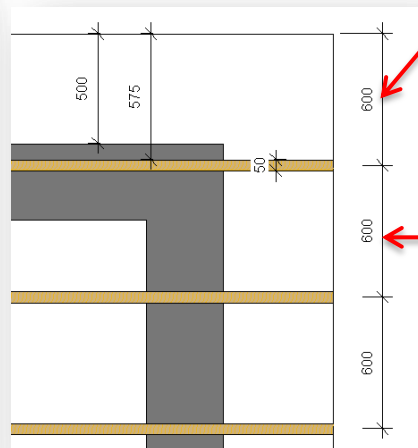
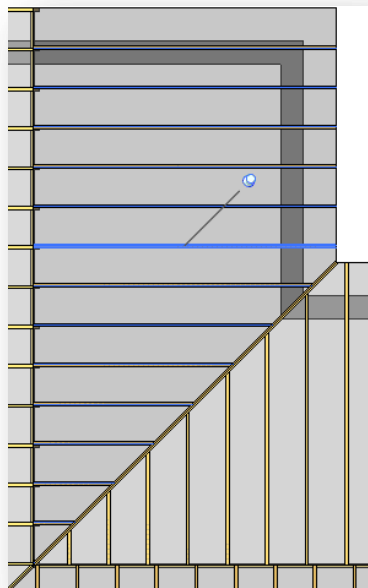
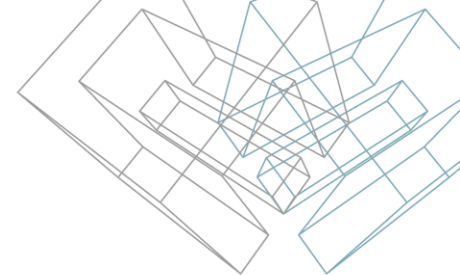
Rafter spacing

- Default 'Split Beam System' settings and the situation before the split.





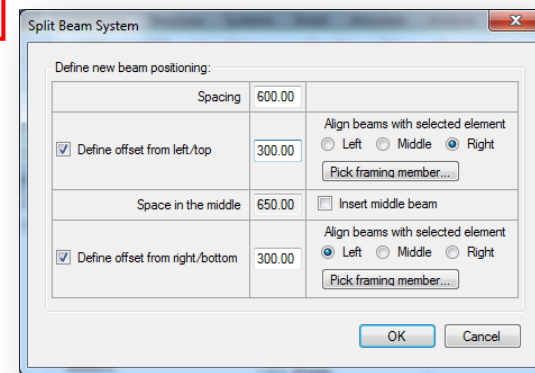
Example Slope II (before the split)



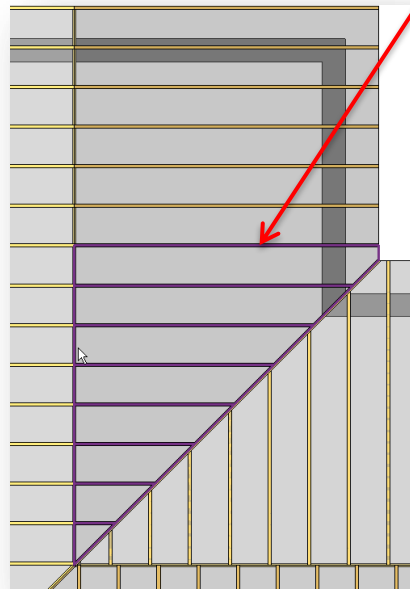
Rafter offset from the right side of the slope

Rafter spacing

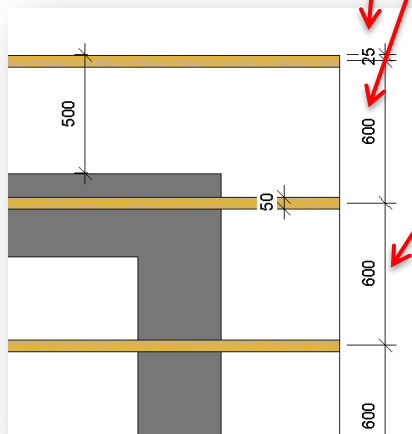
- Default 'Split Beam System' settings and the situation before the split



Example Slope II (result)



This rafter was selected for the split function

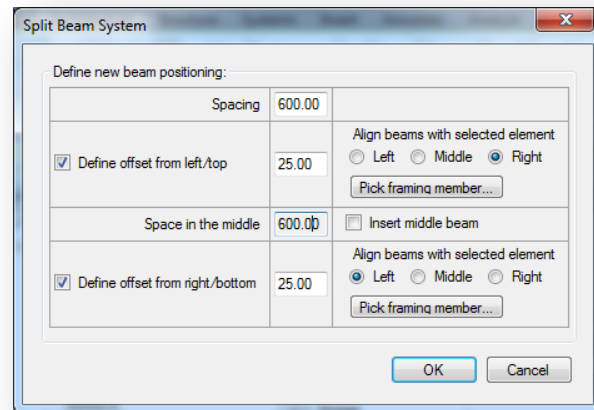


Rafter offset from the right side of the slope

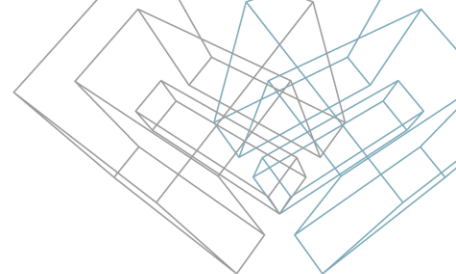
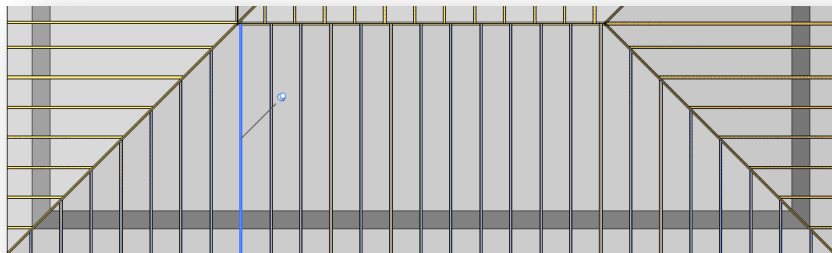
Rafter spacing

Space in the middle

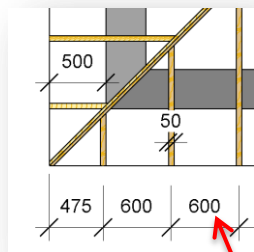
■ 'Split Beam System' settings and the split result.



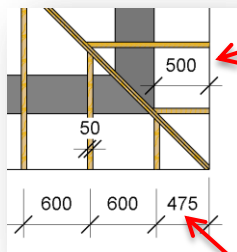
Example Slope III (before the split)



- Default 'Split Beam System' settings and the situation before the split.

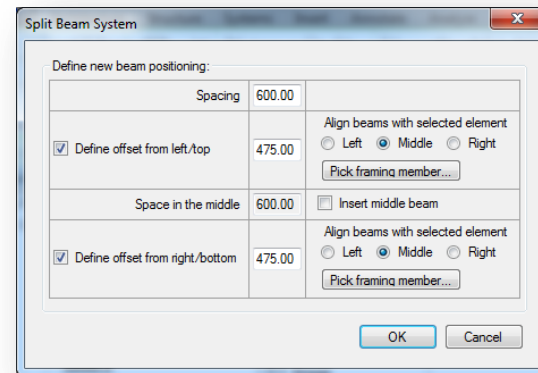


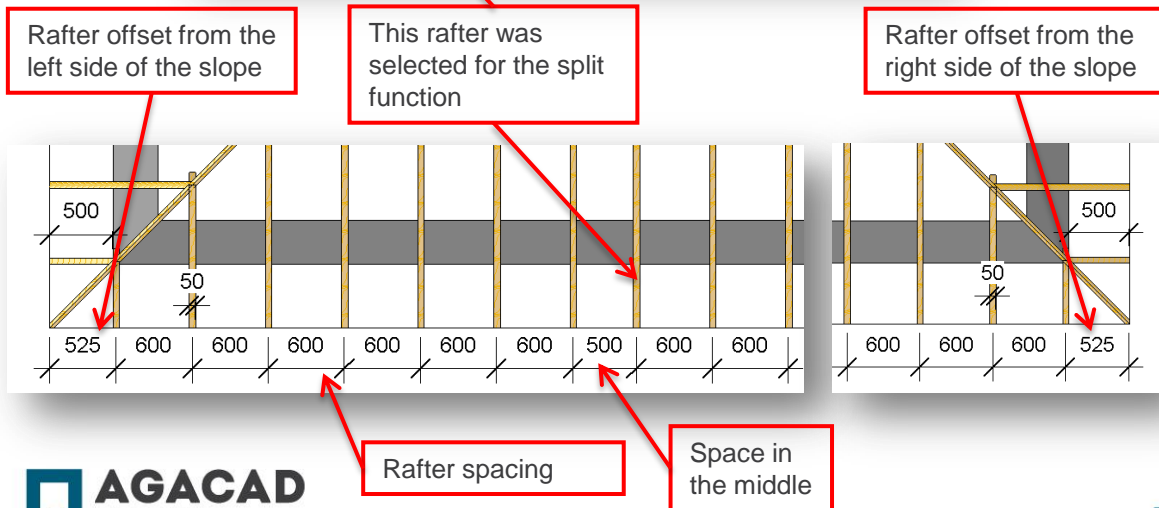
Rafter spacing



Roof overhang

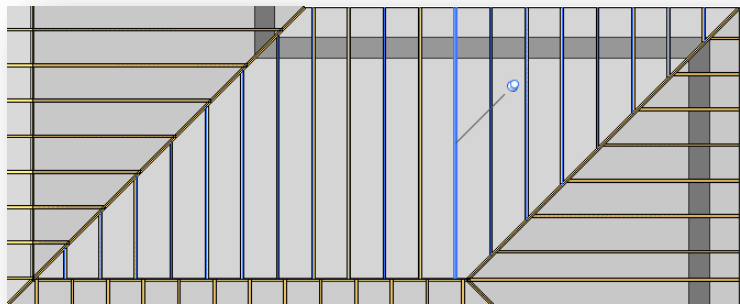
Rafter offset from the right side of the slope





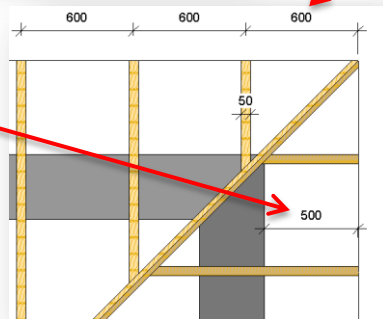
-
- Split Beam System
- Define new beam positioning:
- | | | |
|---|--------|--|
| Spacing | 600.00 | <input type="radio"/> Left <input type="radio"/> Middle <input checked="" type="radio"/> Right
<input type="button" value="Pick framing member..."/> |
| <input checked="" type="checkbox"/> Define offset from left/top | 525.00 | |
| Space in the middle | 500.00 | <input type="checkbox"/> Insert middle beam
<input checked="" type="radio"/> Left <input type="radio"/> Middle <input type="radio"/> Right
<input type="button" value="Pick framing member..."/> |
| <input checked="" type="checkbox"/> Define offset from right/bottom | 525.00 | |
- OK Cancel

Example Slope IV (before the split)

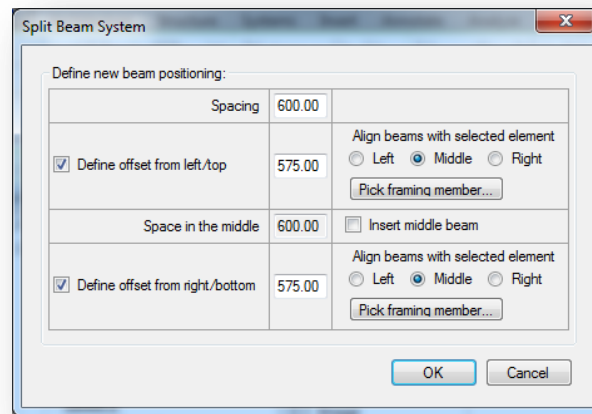


Rafter offset from the left side of the slope

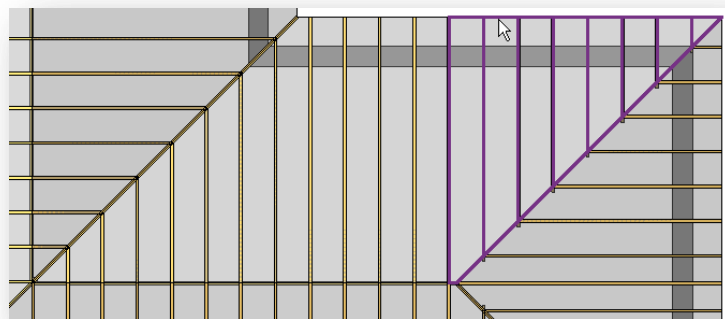
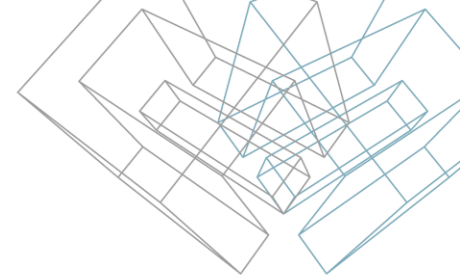
Roof overhang



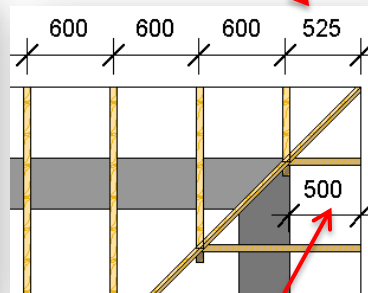
- Default 'Split Beam System' settings and the situation before the split.



Example Slope IV (result)

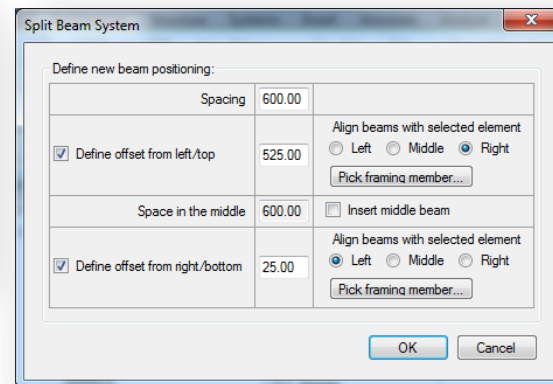


Rafter offset from the slope left side

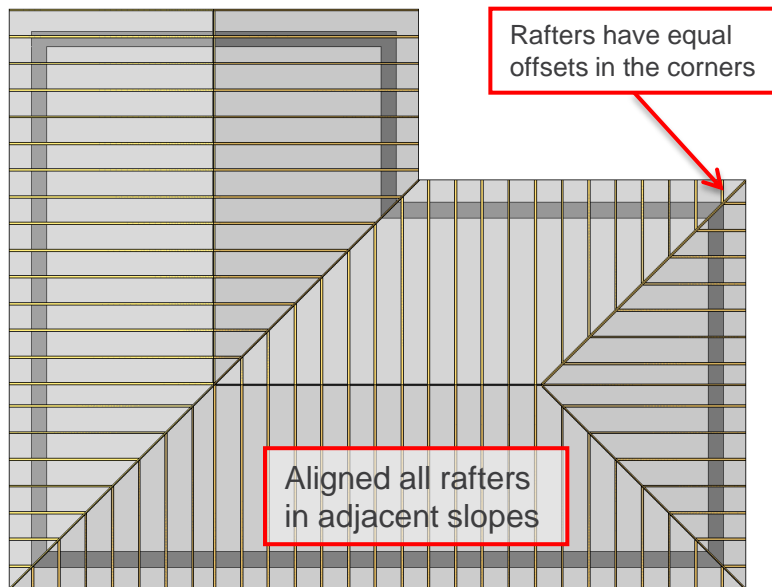
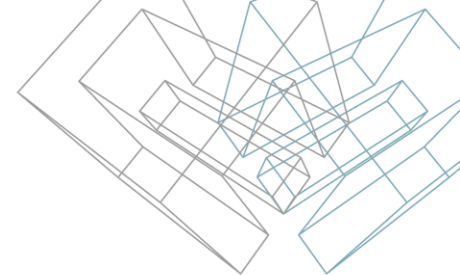


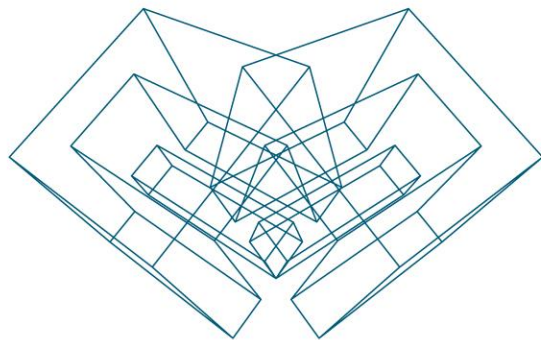
Roof overhang

- *Split Beam System* settings and the split result



Example (finished split)





AGA CAD Ltd

T: +370 618 55671 | E: support@aga-cad.com | W: www.aga-cad.com