# SHEATHING and PANELING LAYOUTS – Sheathing Configuration – Sheathing Layout

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Sheathing Layout - predefine settings for Inner/Top and Outer/Bottom sheathing layers.

Up to two sheathing layers can be created from each side. That's why there are separate settings for the first and second layer.

**First** and **Second** sheathing layers can be predefined in the **Link Wall**, **Link Floor** or **Link Roof** using **Sheathing** and **Sheathing II** from **Framing Layer** column.

Basic Wall : Ext -	16+107+16 C+U STD	Type: Total thickn	Ext - 16+102+ ess: 153	• 16 C + C											
Basic Wall : Ext -	16+107+16 C+U Ext	copes?				EXTERIO	OR SIDE								
		Thickness	Framing Layer	Framing Configuration	Configuration	Frame	Frame Part	Split Parts	Split by	Sheath	hing/Pane	ling Configu	ration	Exclude	Parts
Basic Wall : Ext -	10+89+10 C+C_CH H4300	0 mm	None *	None *	Fixed *	4				Nor	ne		×	4	1
Basic Wall : Ext -	16+89+16 C+C_CH X5	16 mm	Sheathing *	None	Fixed *			1	_	Frame	e - 1 Ex & 1	I in Layers	v		]
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# Parallel or Perpendicular to Stud/Joist

First Inner Layer	
Parallel to Stud/Joist	
Perpendicular to Stud/Joist	
Build in Place	
Bottom/Base Extension	0
Sloped Bottom/Base Extension	0
Top/End Extension	0
Sloped Top/End Extension	0
Placement Direction	From Start V
Vertical Elements Cut Panels	
Horizontal Elements Cut Panels	
Second Row Overlap Distance	0

Parallel or Perpendicular to Stud/Joist - select if the sheathing should be parallel or perpendicular to the joist.



### **Build in Place**

First Inner Layer	
Parallel to Stud/Joist	$\checkmark$
Perpendicular to Stud/Joist	
Build in Place	
Bottom/Base Extension	0
Sloped Bottom/Base Extension	0
Top/End Extension	0
Sloped Top/End Extension	0
Placement Direction	From Start v
Vertical Elements Cut Panels	
Horizontal Elements Cut Panels	
Second Row Overlap Distance	0

**Build in Place** – writes Yes/No information into the sheathing instance parameter if it is build-in-place or is prefabricated with the whole wall/floor/roof frame. This parameter can later be used in schedules or view filters.

Example with wall:



#### Example with floor/roof:

#### 08/09/21, 09:27

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Properties

R	-
Parts (1)	✓ 🔠 Edit Type
Constraints	* ^
Base Level	Level 1
Construction	\$
Link to Connected Wall	
Build in Place	
Framing Configuration	
Part Detail Configuration	
Assembly Mass	
Element Mass	
Assembly Created-Updated	
Dimensions	\$
Volume	0.027 m³
Area	1.339 m²
Thickness	20.0
Excluded	



#### Example with metal roof:



## Bottom/Base Extension and Top/End Extension

F	irst Inner Layer		
	Parallel to Stud/Joist	$\checkmark$	
	Perpendicular to Stud/Joist		
	Build in Place		_
	Bottom/Base Extension	200	
	Sloped Bottom/Base Extension	0	
	Top/End Extension	-300	
	Sloped Top/End Extension	0	
	Placement Direction	From Start v	
	Vertical Elements Cut Panels		
	Horizontal Elements Cut Panels		
	Second Row Overlap Distance	0	

#### Bottom/Base Extension, Top/End Extension – adds an offset from the wall/floor/roof base or end.

#### Example with metal wall:



Example with wood floor/roof:



# Sloped Top/End Extension and Sloped Bottom/Base

### Extension

- 6	First Inner Laver		
ſ			
	Parallel to Stud/Joist	$\checkmark$	
	Perpendicular to Stud/Joist		
	Build in Place		
	Bottom/Base Extension	200	
	Sloped Bottom/Base Extension	300	
	Top/End Extension	-300	
	Sloped Top/End Extension	-100	
	Placement Direction	From Start V	
	Vertical Elements Cut Panels		
	Vertical Elements Cut Panels Horizontal Elements Cut Panels		
	Vertical Elements Cut Panels Horizontal Elements Cut Panels Second Row Overlap Distance	□ □ 0	

**Sloped Top/End Extension** and **Sloped Bottom/Base Extension** – adds an offset from the sloped wall/roof/roof base or end.



### **Placement Direction**

-F	irst Inner Layer		
	Parallel to Stud/Joist	✓	
	Perpendicular to Stud/Joist		
	Build in Place		
	Bottom/Base Extension	200	
	Sloped Bottom/Base Extension	300	
	Top/End Extension	-300	
	Sloped Top/End Extension	-100	
	Placement Direction	From Start V	
	Vertical Elements Cut Panels		-
	Horizontal Elements Cut Panels		
	Second Row Overlap Distance	0	
-			

#### Placement Direction - predefines sheathing direction: From Start, From End or From Both Sides.



*Example with floor/roof:* 

		_	_	_			-	-	 _	-	_	
_												
		 -	-				-	-	 -	-		
From	Start									Fro	om E	Ene

### Second Row Overlap Distance

- First Inner Layer	
Parallel to Stud/Joist	$\checkmark$
Perpendicular to Stud/Joist	
Build in Place	
Bottom/Base Extension	0
Sloped Bottom/Base Extension	0
Top/End Extension	0
Sloped Top/End Extension	0
Placement Direction	From Start Y
Vertical Elements Cut Panels	
Horizontal Elements Cut Panels	
Second Row Overlap Distance	20

**Second Row Overlap Distance** – defines overlap distance between sheathing layouts if **Perpendicular to Stud/Joist** checkbox is ticked.

#### Example with wall:



#### Example with floor/roof:



### Align with Studs/Joists

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	;
Allow to Split on Second King/Joist	$\checkmark$
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	✓
Vertical Split On Opening Side	Opening Side v
Minimal Width of Opening for Split	0
Horizontal Split On Opening Side	
Split by Steeped Top Ridge	
Split by Steeped Bottom Ridge	

#### Align with Studs/Joists - aligns sheathing with studs or joists.

#### Example with wood frame:





Example - ceiling gypsum elements can be divided into Parts and aligned with ceiling frames:

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# Allow to Split on Second King/Joist

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	5
Allow to Split on Second King/Joist	$\checkmark$
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	
Vertical Split On Opening Side	Opening Side v
Minimal Width of Opening for Split	0
Horizontal Split On Opening Side	
Split by Steeped Top Ridge	
Split by Steeped Bottom Ridge	

#### Allow to Split on Second King/Joist – splits the sheathing on the second king or joist of the opening.

#### Example with wood frame:







Example with metal frame:



#### Example with metal floor frame:

### Always Try to Merge Parts

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	;
Allow to Split on Second King/Joist	✓
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	
Vertical Split On Opening Side	Opening Side v
Minimal Width of Opening for Split	0
Horizontal Split On Opening Side	
Split by Steeped Top Ridge	
Split by Steeped Bottom Ridge	

**Always Try to Merge Parts** – tries to merge parts if two parts share the same edge. Merged part size will not exceed the sheathing size that is predefined under **Sheathing Dimensions**.



# Including Part with Different Edges

Align with Studs/Joists	✓
Split by Secondary Custom Studs/Joists Axis	;
Allow to Split on Second King/Joist	$\checkmark$
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	
Vertical Split On Opening Side	Opening Side v
Vertical Split On Opening Side Minimal Width of Opening for Split	Opening Side v 0
Vertical Split On Opening Side Minimal Width of Opening for Split Horizontal Split On Opening Side	Opening Side v 0
Vertical Split On Opening Side Minimal Width of Opening for Split Horizontal Split On Opening Side Split by Steeped Top Ridge	Opening Side v 0

**Including Part with Different Edges** – tries to merge parts with different edges of two parts. Merged part size will not exceed the sheathing size that is predefined under **Sheathing Dimensions**.

#### Including Part with Different Edges is switched ON:



Including Part with Different Edges is switched OFF:



### Vertical Split on Opening Side

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	
Allow to Split on Second King/Joist	✓
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	$\checkmark$
Vertical Split On Opening Side	Opening Side v
Vertical Split On Opening Side Minimal Width of Opening for Split	Opening Side v 0
Vertical Split On Opening Side Minimal Width of Opening for Split Horizontal Split On Opening Side	Opening Side v 0
Vertical Split On Opening Side Minimal Width of Opening for Split Horizontal Split On Opening Side Split by Steeped Top Ridge	Opening Side v 0

**Vertical Split on Opening Side** – splits sheathing on the opening side, the nearest stud/joist, or the nearest king if top and bottom trimmers are predefined in the **Opening Framing**.



Example with wood wall frame:

You can predefine top and bottom trimmers under **Wall** +  $\rightarrow$  **Configs**  $\rightarrow$  **Framing Configuration**  $\rightarrow$  **Opening Framing**:

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Example with metal wall frame:



You can predefine top and bottom trimmers under **Wall+M**  $\rightarrow$  **Configs**  $\rightarrow$  **Framing Configuration**  $\rightarrow$  **Opening Framing**:



#### Example with metal floor:



You can predefine top and bottom trimmers under **Floor+M**  $\rightarrow$  **Configs**  $\rightarrow$  **Framing Configuration**  $\rightarrow$  **Opening Framing**:



# Minimal Width of Opening for Split

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	
Allow to Split on Second King/Joist	
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	✓
Vertical Split On Opening Side	Opening Side 🗸 🗸
Minimal Width of Opening for Split	0
Horizontal Split On Opening Side	
Split by Steeped Top Ridge	
Split by Steeped Bottom Ridge	

Minimal Width of Opening for Split – define the minimum width of opening for which splits would be available.

Example: If the window, door, or other opening width is less than the predefined value, then there will be no splits around the opening:



If the window, door, or other opening width is more than the predefined value, then there will be splits around the opening:



# Horizontal Split on Opening Side

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	
Allow to Split on Second King/Joist	
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	✓
Vertical Split On Opening Side	Opening Side v
Minimal Width of Opening for Split	0
Horizontal Split On Opening Side	
Split by Steeped Top Ridge	
Split by Steeped Bottom Ridge	

Horizontal Split on Opening Side – defines if the sheathing must be split horizontally around the opening.





#### Example: Horizontal Split on Opening Side is ticked ON:



# Split by Steeped Top/Bottom Ridge

Align with Studs/Joists	
Split by Secondary Custom Studs/Joists Axis	
Allow to Split on Second King/Joist	
Always Try to Merge Parts	Vertically & Horizontall
Including Parts with Different Edges	✓
Vertical Split On Opening Side	Opening Side v
Minimal Width of Opening for Split	0
Horizontal Split On Opening Side	
Split by Steeped Top Ridge	
Split by Steeped Bottom Ridge	

**Split by Steeped Top/Bottom Ridge** – splits sheathing by steeped top or bottom ridges.

