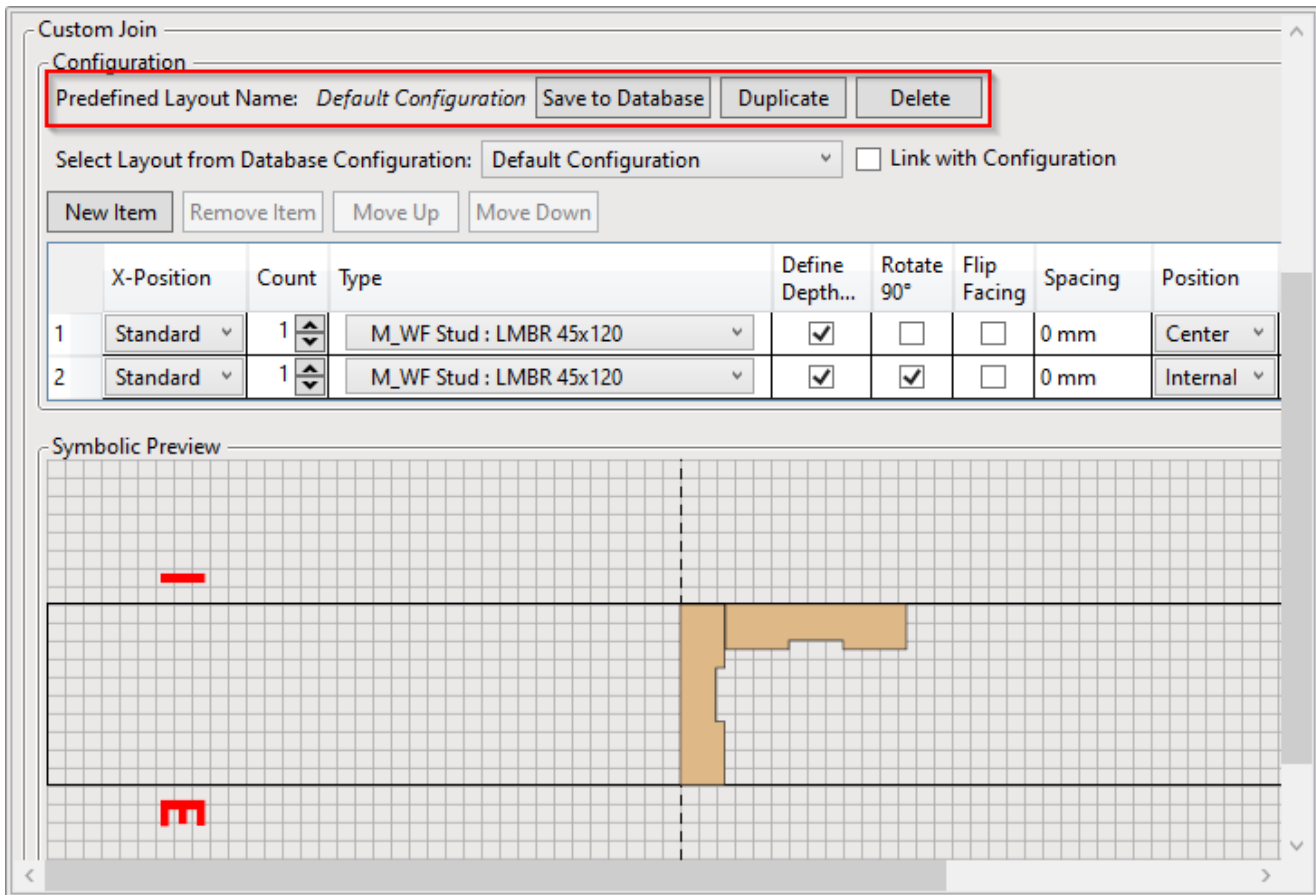


Custom Join

Modified on: Sun, 10 Jan, 2021 at 5:59 PM

Custom Join – is a multi-functional dialog where user can define rules for studs/joins including size, count, position, rotation, spacing, alignment etc. All these rules can be saved and used in other framing configurations or shared with other users. This type of dialog is used frequently in our products.

Predefined Layout Name



Predefined Layout Name – here you can check the predefined configuration name. Configurations saves all information listed down below. **Default Configuration** is a sample configuration that comes with the software.

All modifications can be saved to the current configuration using **Save to Database**.

Duplicate – duplicates existing configuration in order to create a new one.

Delete – deletes configuration from the database.

Default path to database with layout configurations is:

C:\Users\user name\AppData\Roaming\Tools 4 Revit\Wall+2021 (or other product and version) Configurations\CustomFramingJoins

Every configuration is created in a separate XML file and stored in corresponding folder.

C:\Users\Renata\AppData\Roaming\Tools 4 Revit\Wall+ 2020 Configurations\CustomFramingJoins

Name	Date modified	Type	Size
BNB	2020-07-19 12:35	File folder	
F	2020-07-19 12:35	File folder	
Header	2019-08-20 18:49	File folder	
King	2019-08-20 18:49	File folder	
L	2020-07-19 12:35	File folder	
Plate	2020-07-19 12:35	File folder	
Ridge	2020-07-19 12:35	File folder	
Sill	2019-08-20 18:49	File folder	
Stepped Ridge	2020-07-19 12:35	File folder	
Stud	2020-07-19 12:35	File folder	
T	2020-07-19 12:35	File folder	
TopSupportHeader	2019-08-20 18:49	File folder	
Trimmer	2019-08-20 18:48	File folder	
VerticalBlock	2019-08-14 19:05	File folder	

If needed you can modify the path to all configurations in **Wall+**, **Floor+** or **Roof+** → **Settings** → **Configuration Files' Location**.

Select Layout from Database Configuration

Custom Join

Configuration

Predefined Layout Name: *Default Configuration*

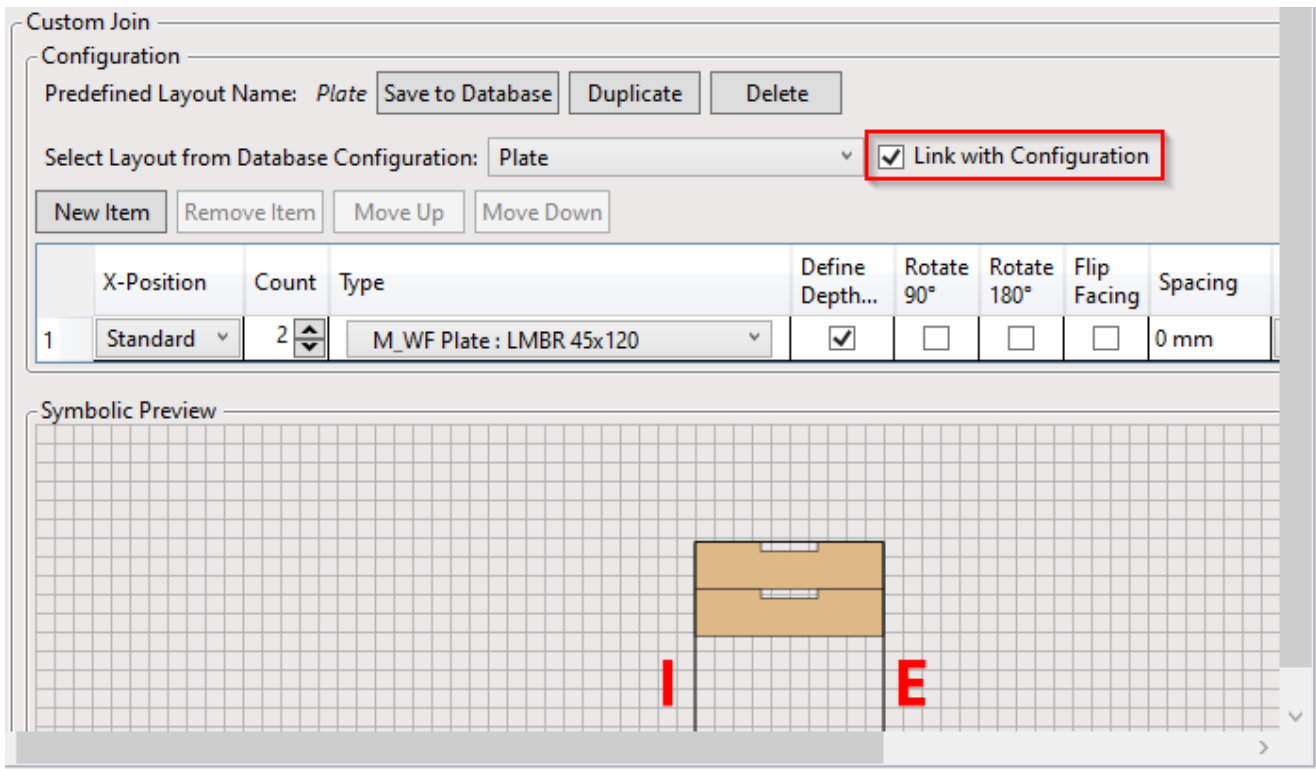
Select Layout from Database Configuration: Link with Configuration

	X-Position	Count	Type	Define Depth...	Rotate 90°	Flip Facing	Spacing	Position
1	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal

Symbolic Preview

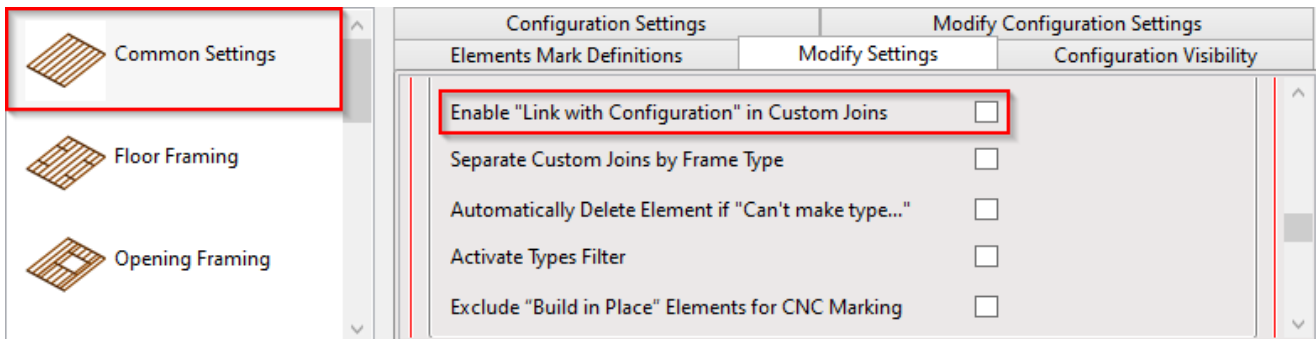
Select Layout from Database Configuration – select layout from the list.

Link with Configuration



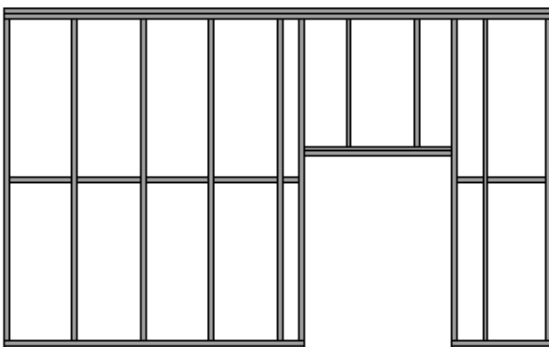
Link with Configuration – makes a link between selected layout in the current custom join and other custom joins were the same layout was used.

In order to use **Link with Configuration** switch this option in **Framing Configuration – Enable "Link to Configuration" in Custom Joins:**

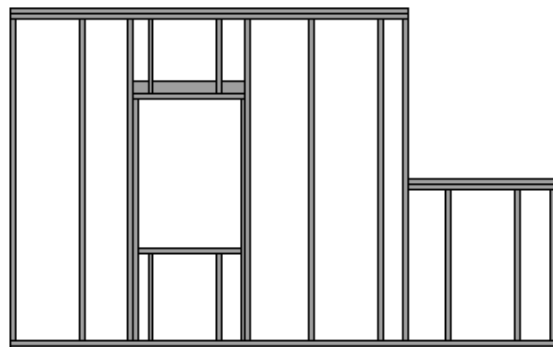


For example, were is two wall frames which is created using different configuration names. Now we need to make one top/bottom plate instead of two in all frames:

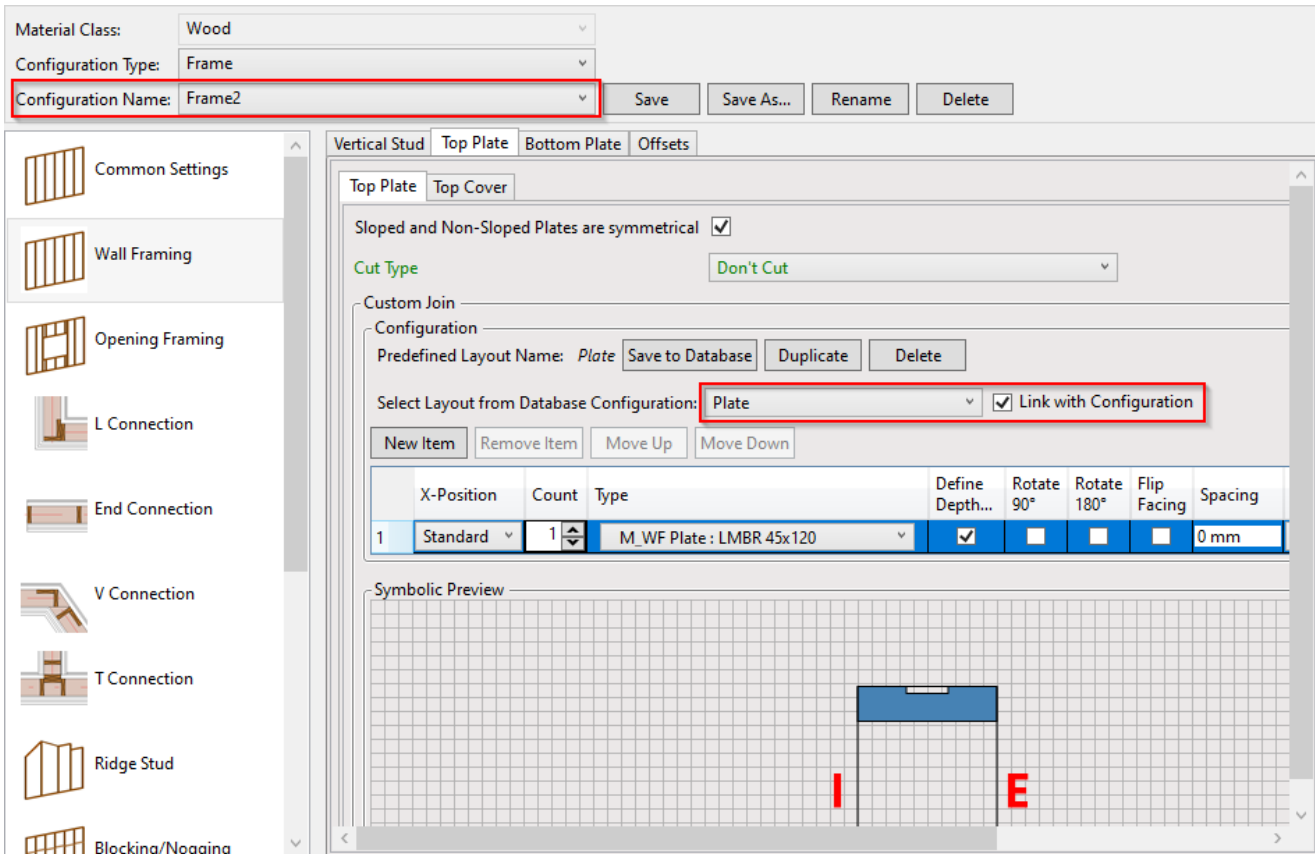
Configuration Name = *Frame1*



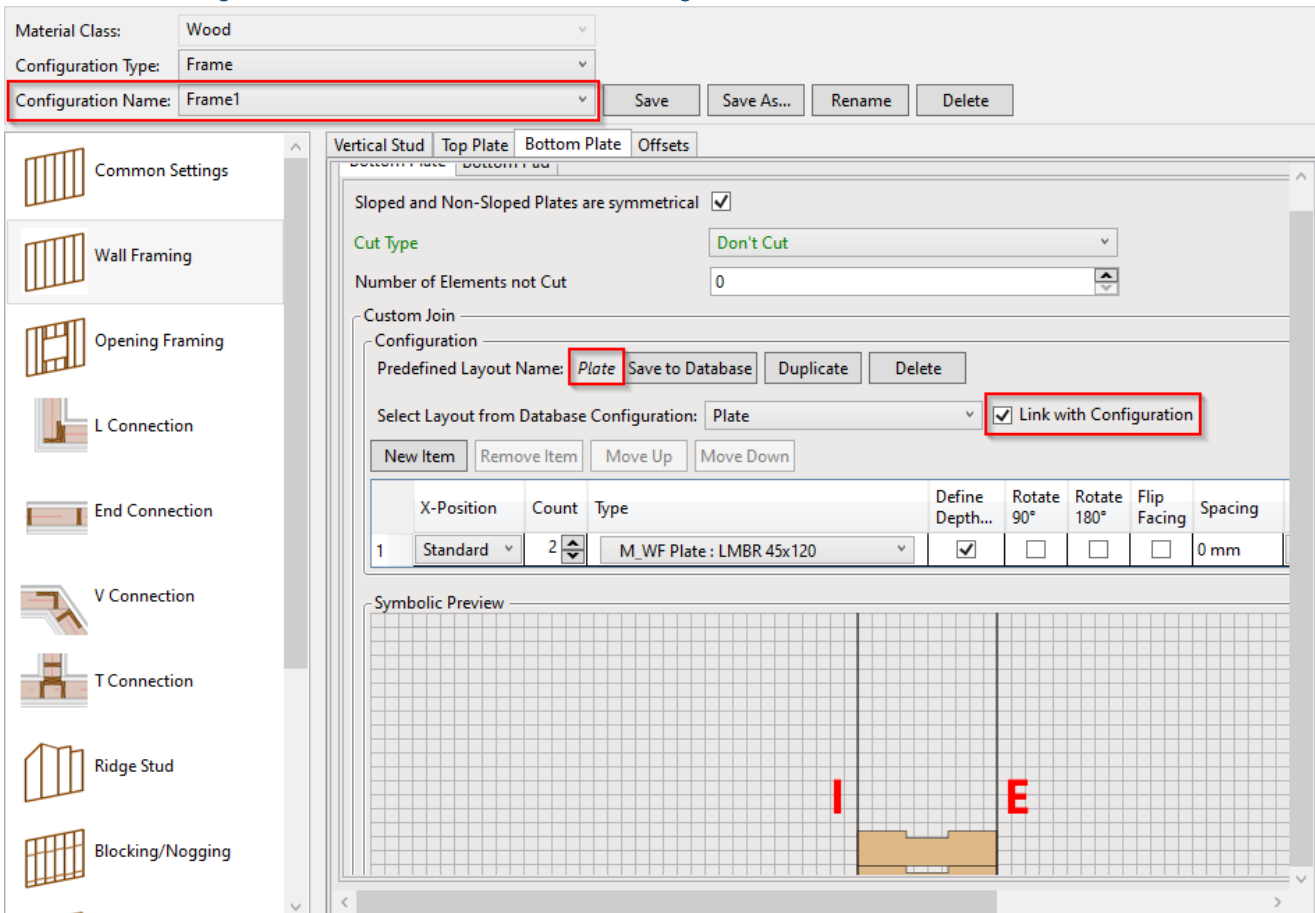
Configuration Name = *Frame2*



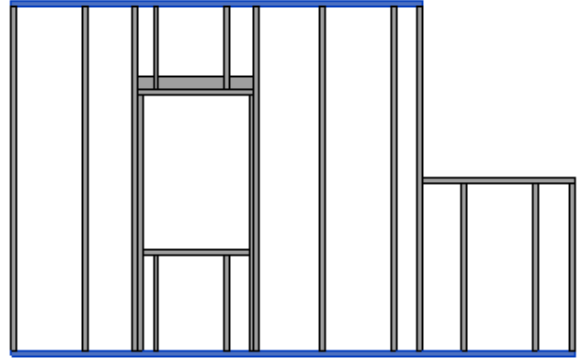
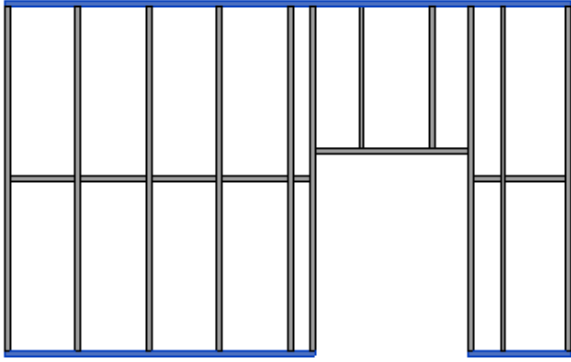
Instead of changing top/bottom plates manually one by one for every configuration, just change the layout, save it and switch **ON Link with Configuration**:



Now in other configuration make sure that *Link with Configuration* is switched ON too:



After updating frames with **Update Frame using Wall Link**, modifying or creating new frames, top/bottom plates now will have one element instead of two:



New Item, Remove Item, Move Up, Move Down

Custom Join

Configuration

Predefined Layout Name: *Default Configuration*

Select Layout from Database Configuration: Link with Configuration

	X-Position	Count	Type	Define Depth...	Rotate 90°	Flip Facing	Spacing	Position
1	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal

Symbolic Preview

The symbolic preview shows a grid with a vertical dashed line. On the left side of the dashed line, there is a red horizontal line and a red 'm' symbol below it. On the right side of the dashed line, there is a brown L-shaped stud/joist.

New Item – adds new stud/joist.

Remove Item – removes selected stud/joist.

Move Up – moves selected stud/joist up.

Move Down – moves selected stud/joist down.

Symbolic Preview

Custom Join

Configuration

Predefined Layout Name: *Default Configuration*

Select Layout from Database Configuration: Link with Configuration

	X-Position	Count	Type	Define Depth...	Rotate 90°	Flip Facing	Spacing	Position
1	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal

Symbolic Preview

Symbolic Preview – shows symbolic preview of created situation. You can easily see the position, rotation, alignment type, and sample spacing. Preview in the picture above is for regular stud/joist. It will be a little bit different for headers, connections etc.

It does not show exact stud/joist sizes and spacing between them.

1 and **2** indicate the sides of the intersecting wall/floor/roof. These sides are used for stud/joist positioning.

I or **E** indicate where the **Internal (Bottom)** or **External (Top)** sides of the wall/floor/roof are.

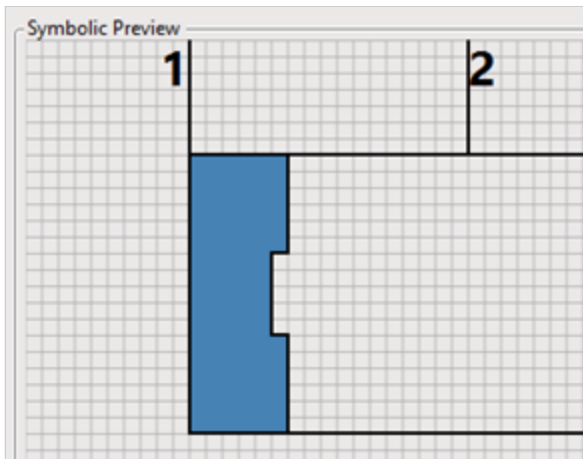
X-Position

	X-Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts
1	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>

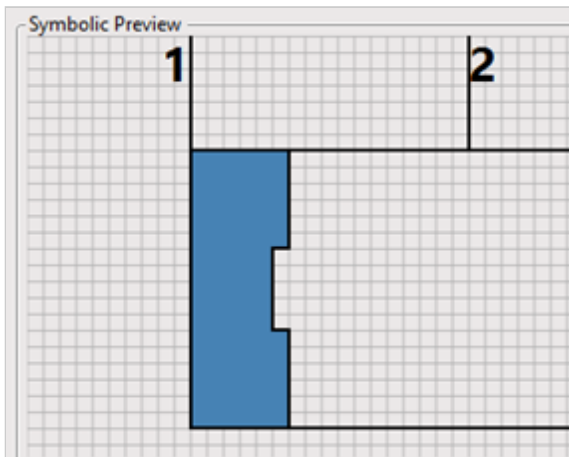
Symb

X-Position – controls stud/joist position related to intersecting wall/floor/roof.

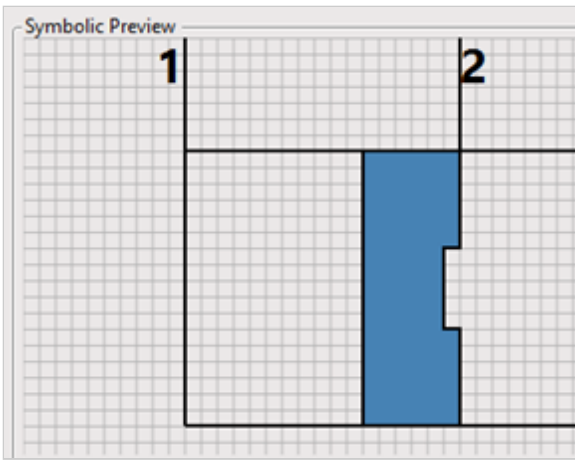
Standard – places the stud/joist without any alignment with intersecting wall/floor/roof:



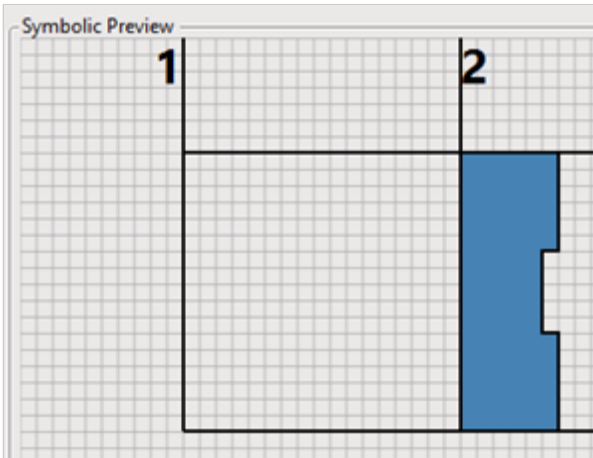
Inner Side 1 – places the stud/joist along inner side 1 of intersecting wall/floor/roof:



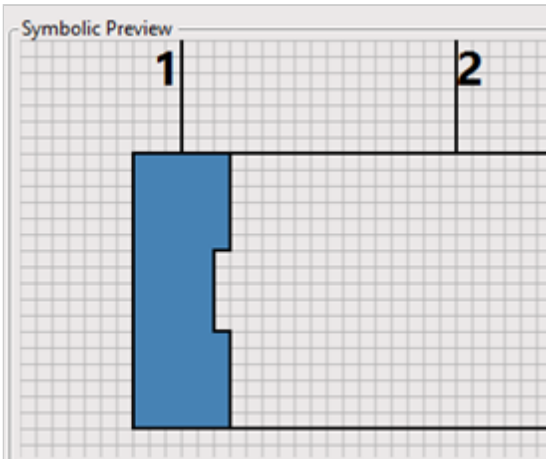
Inner Side 2 – places the stud/joist along inner side 2 of intersecting wall/floor/roof:



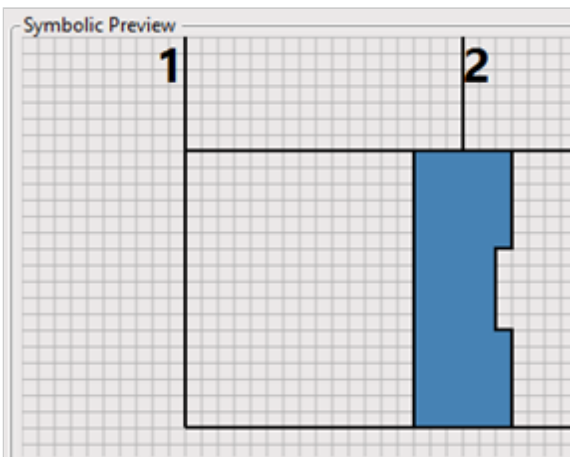
Outer Side 2 – place the stud/joist along outer side 2 of intersecting wall/floor/roof:



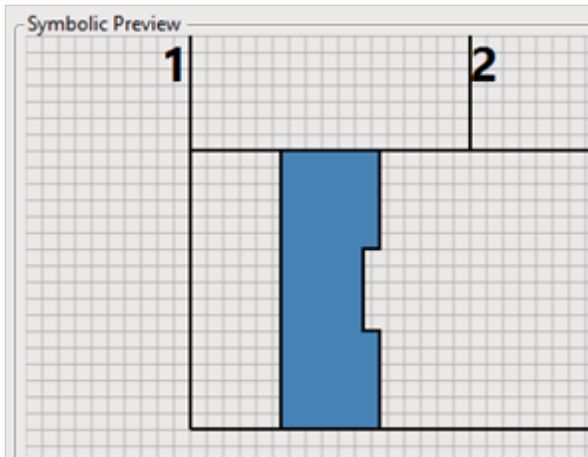
Side 1 by Center – centers the stud/joist with intersecting wall/floor/roof side 1:



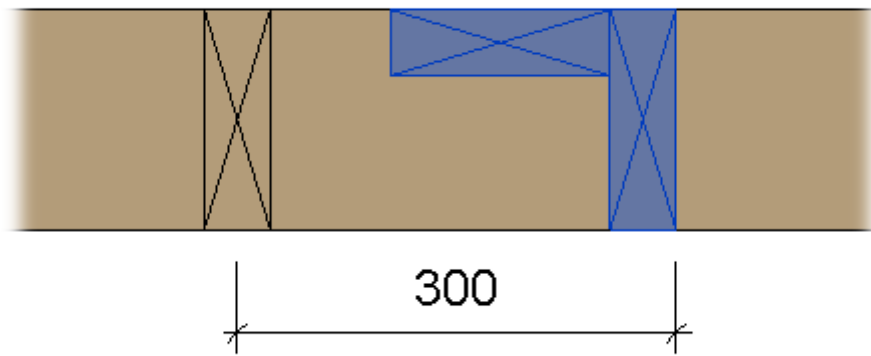
Side 2 by Center – centers the stud/joist with intersecting wall/floor/roof side 2:



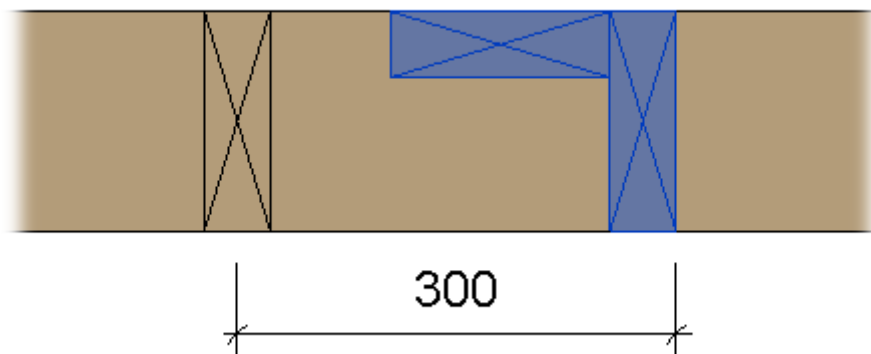
Center – places the stud/joist at center of intersecting wall/floor/roof:



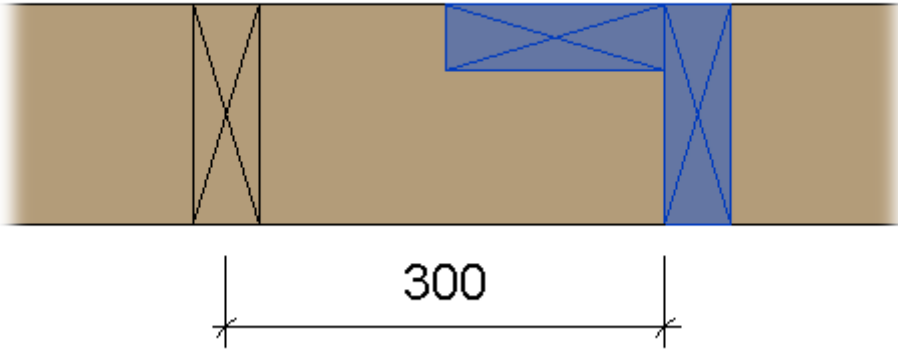
Example with floor/roof vertical block. First joist is added without any alignment:



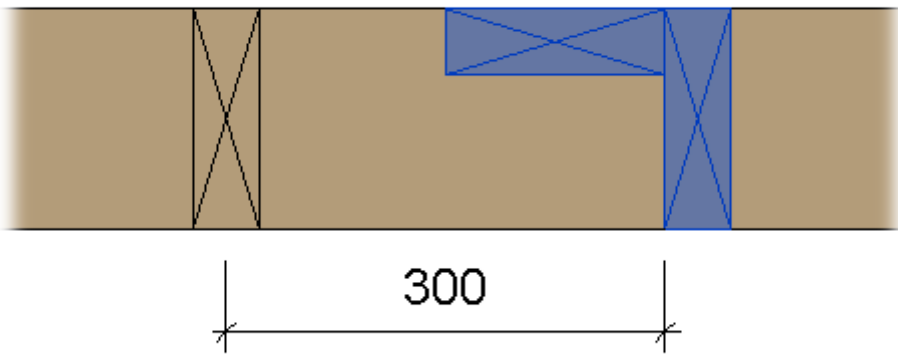
*Example with floor/roof vertical block. **Inner Side 1** – places the joist along its first inner side:*



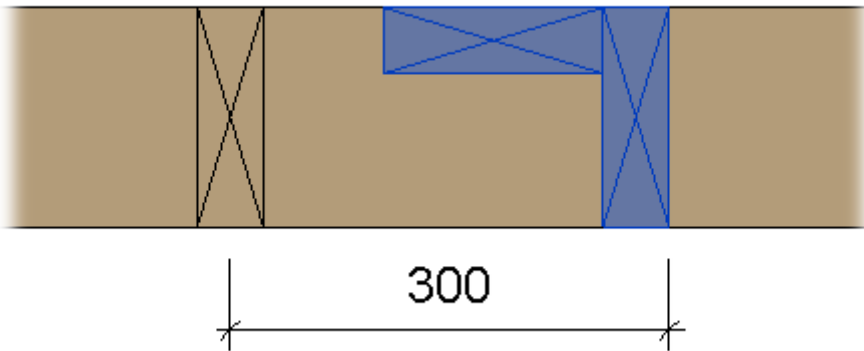
*Example with floor/roof vertical block. **Inner Side 2** – places the joist along its second inner side:*



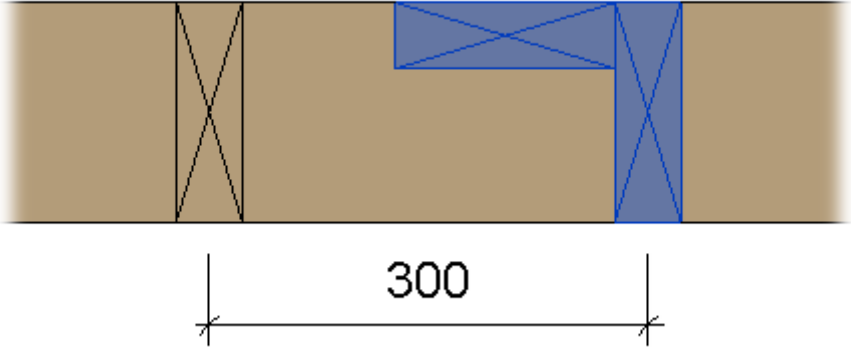
Example with floor/roof vertical block. **Outer Side 1** – places the joist along its first outer side:



Example with floor/roof vertical block. **Outer Side 2** – places the joist along its second outer side:



Example with floor/roof vertical block. **Center** – places the joist along its center:

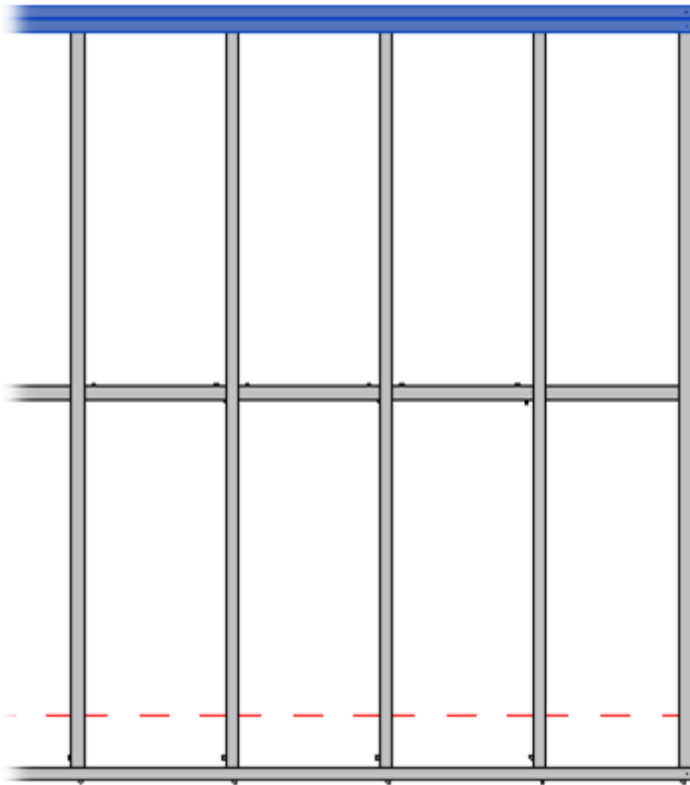


	X-Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts
1	Inner Side	2	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>

Symbolic Preview

Count – defines the number of identical studs/joists.

Example, two top plates are used in wall framing:



Type – selected stud/joist family and type. Default families are loaded together with the software. Any time can be loaded manually using **Wall+**, **Floor+** or **Roof+** → **Settings** → **Load Families** function.

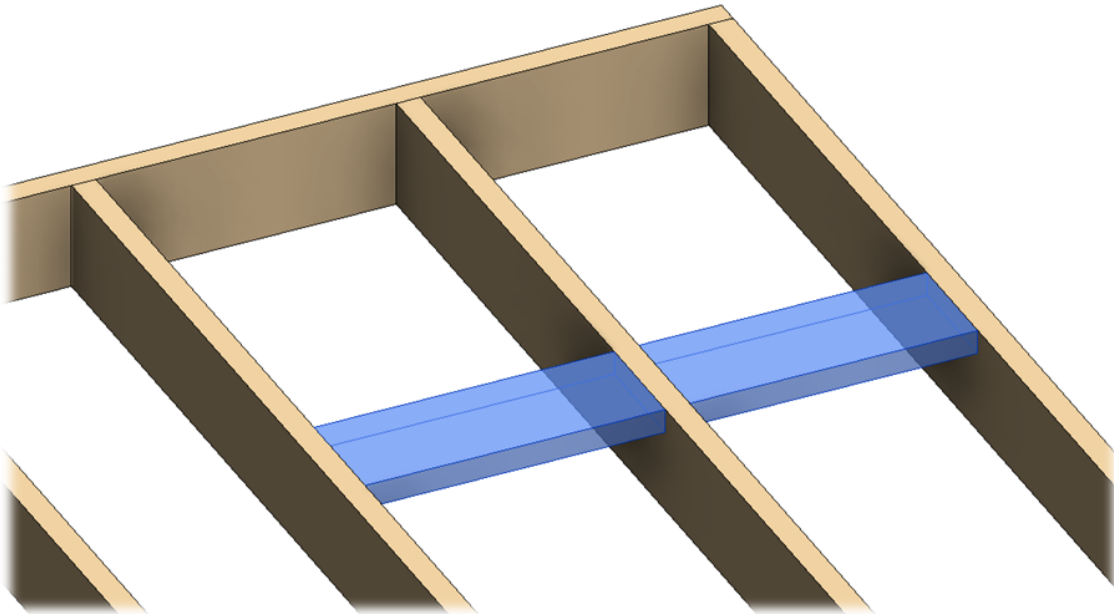
Depth by Core – stud/joist size will be adjusted according to the wall/floor/roof layer thickness during wall/floor/roof framing process.

	X-Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts
1	Inner Side	2	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>

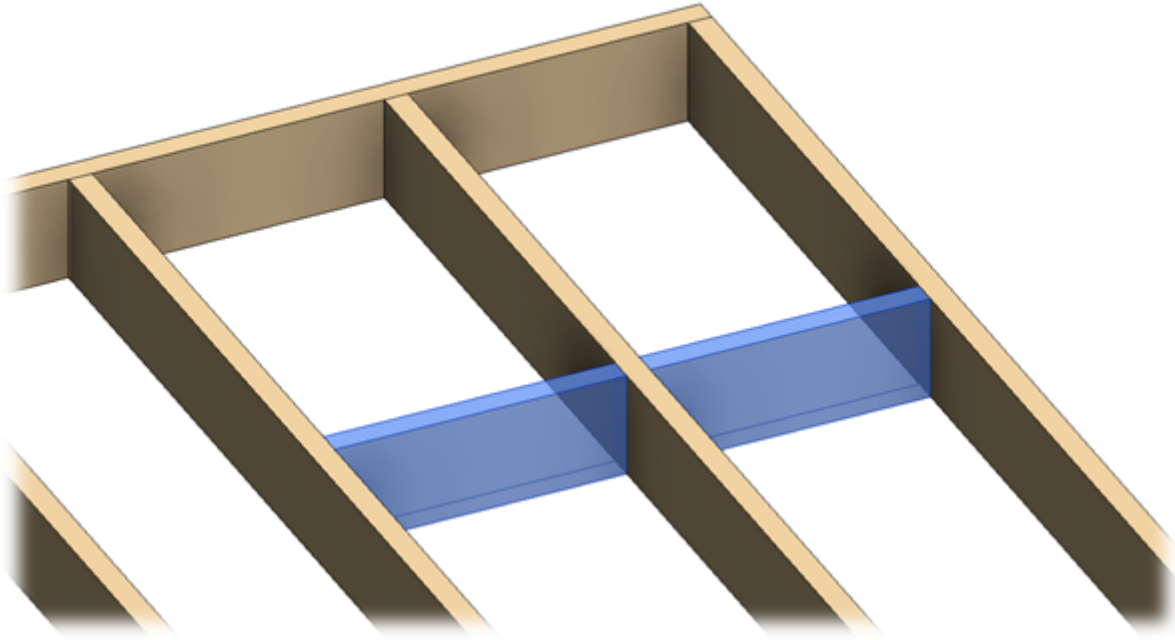
Symbolic Preview

Rotate 90° – rotates selected stud/joist by 90 degrees.

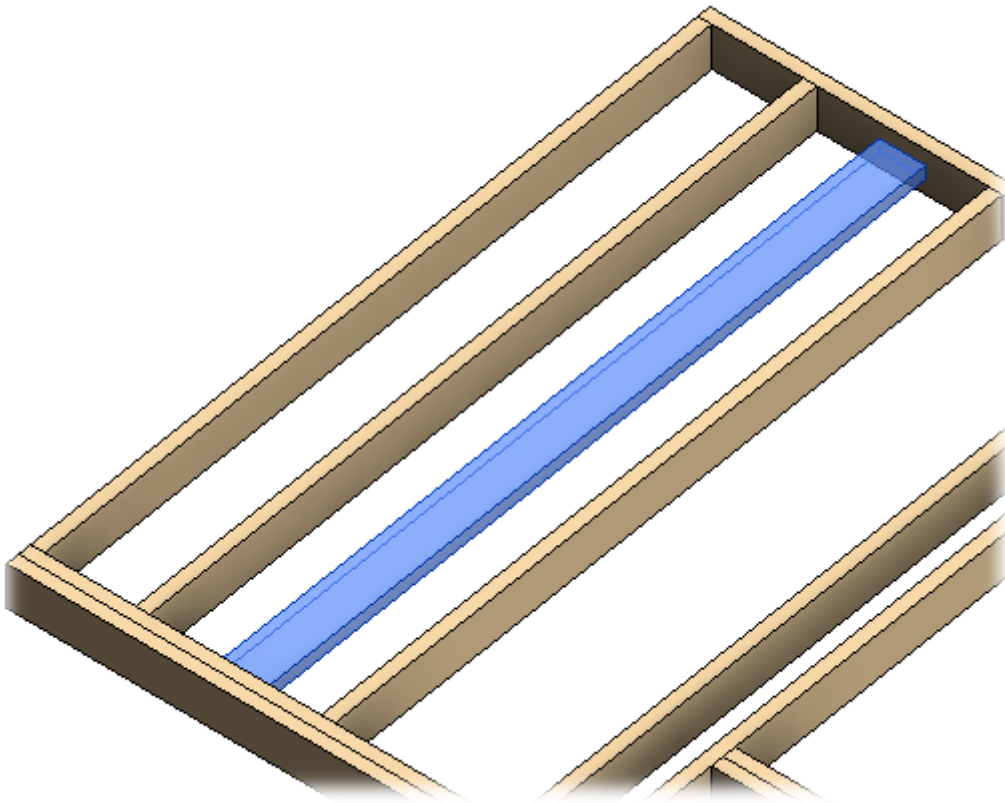
*Example with horizontal Joist/Rafter/Bridging: **Rotate 90°** is ON:*



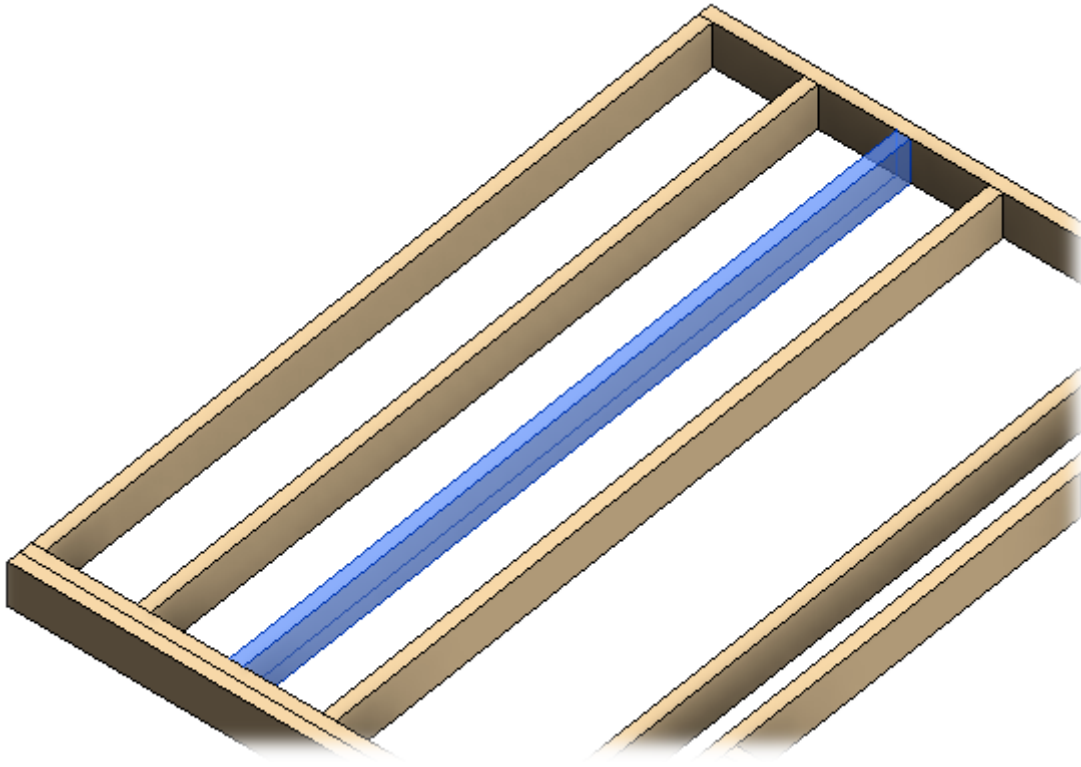
*Example with horizontal Joist/Rafter/Bridging: **Rotate 90°** is OFF:*



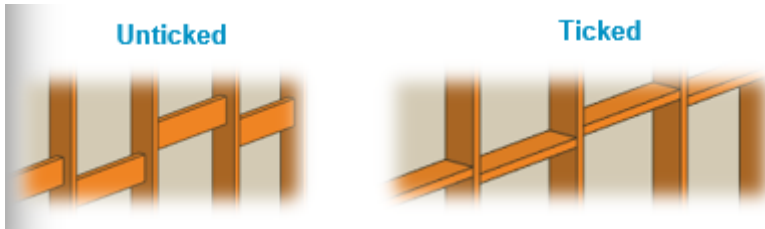
*Example with additional joist, **Rotate 90°** is ON:*



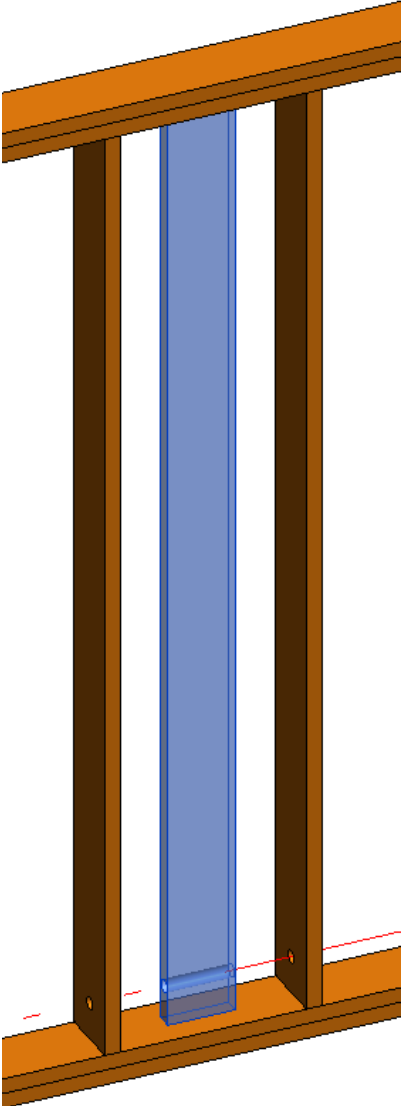
*Example with additional joist, **Rotate 90°** is OFF:*



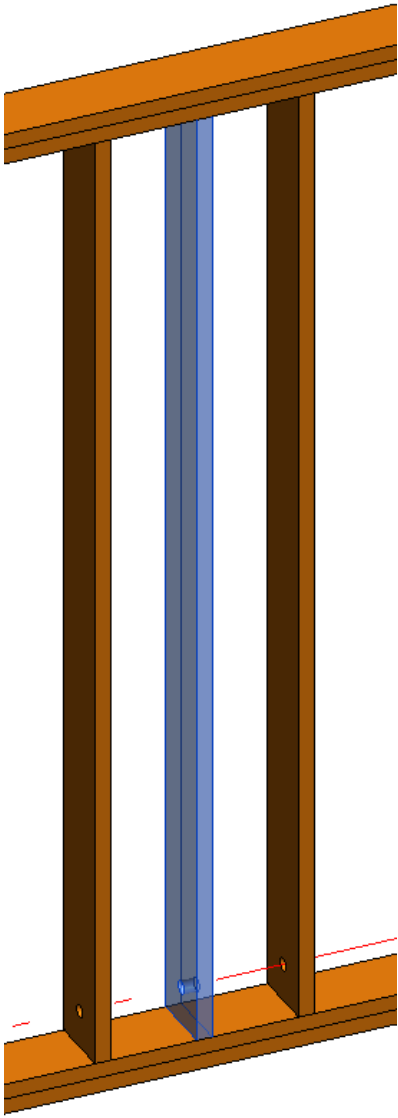
Wall example:



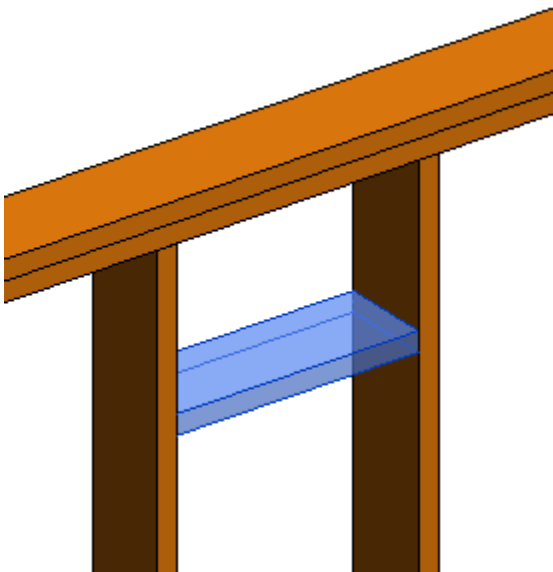
Example with additional stud if ticked:



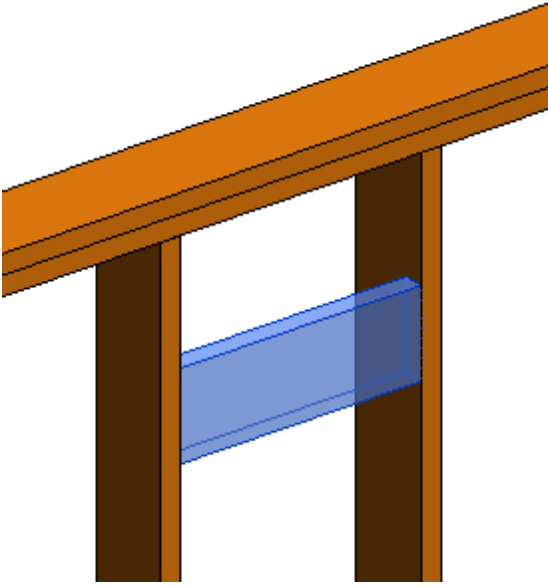
Example with additional stud if unticked:



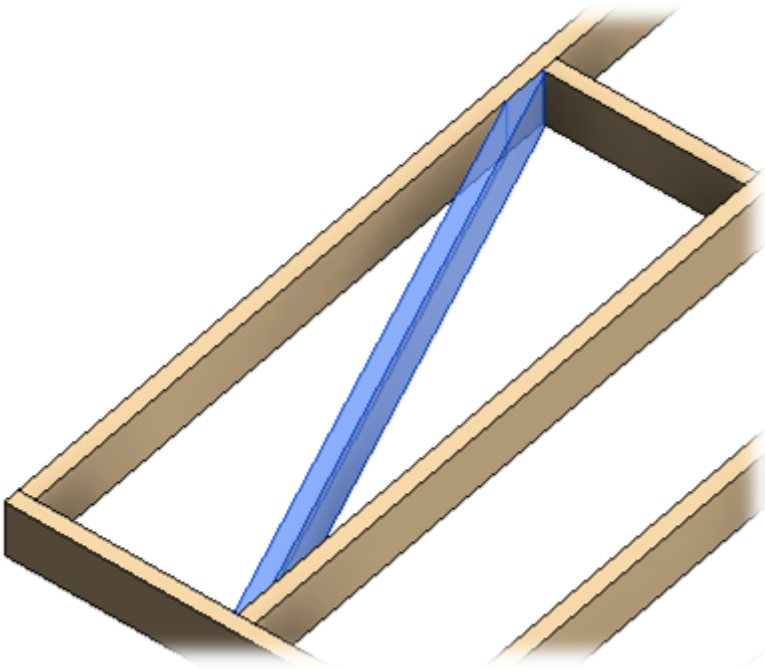
Example with additional bridging/nogging when ticked:



Example with additional bridging/nogging when unticked:

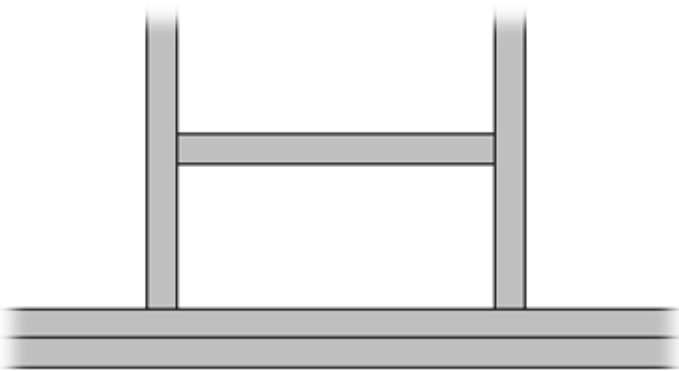


Example with wood floor: when **Rotate 90°** is switched OFF:

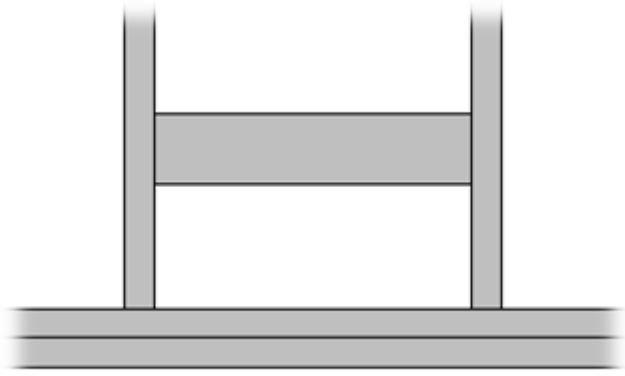


Example with metal frame:

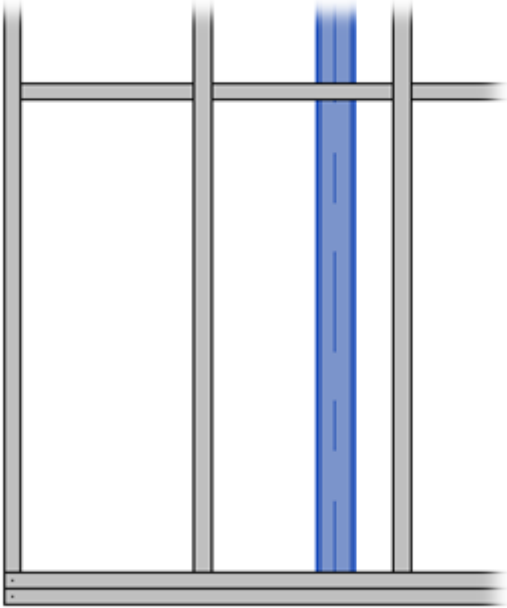
Ticked:



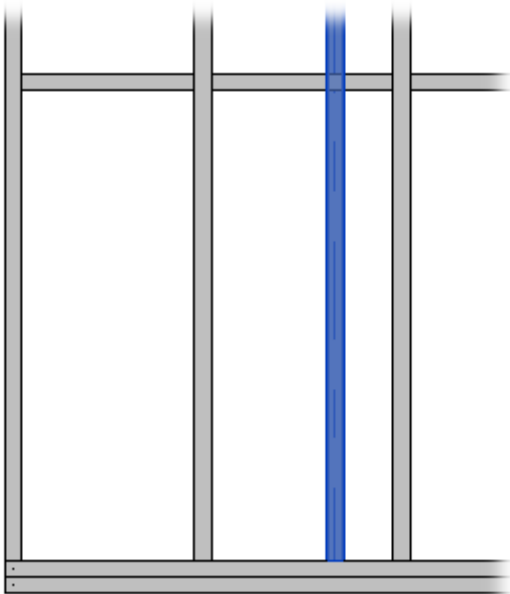
Unticked:



Example with metal additional stud: **Rotate 90°** is ticked:



Example with metal additional stud: **Rotate 90°** is unticked:



Rotate 180 – rotates selected stud/joist by 180 degrees. This option is important when the stud/joist is not symmetrically shaped. For rectangular studs/joists this option usually is not used.

Example with metal wall studs:

Unticked

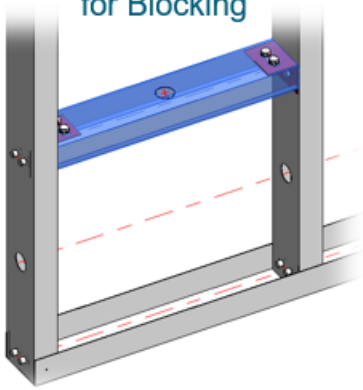


Ticked

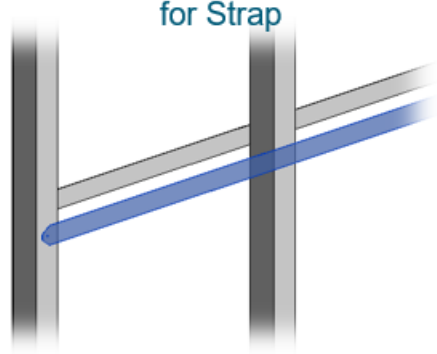


Example with metal wall blocking, strap:

Rotate 90° and Rotate 180° are ticked for Blocking



Rotate 90° and Rotate 180° are unticked for Strap



Spacing – distance between the selected stud/joist and the previous stud/joist.

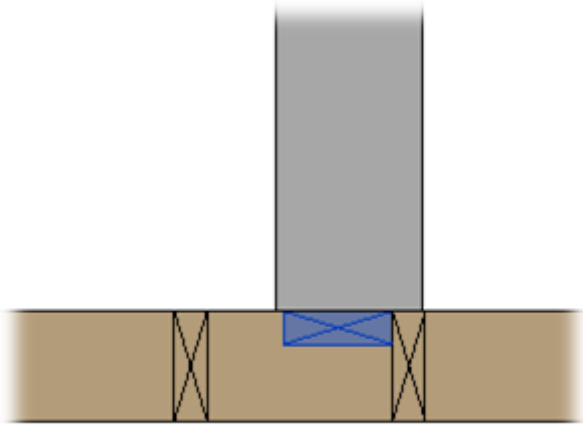
Position

	X-Position	Count	Type	Define Depth...	Rotate 90°	Rotate 180°	Spacing	Position	Align Type	Extend Start	Extend End	Cuts
1	Standard	2	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0 mm	Near Ct	Previou	None	None	<input checked="" type="checkbox"/>

Symbolic Preview

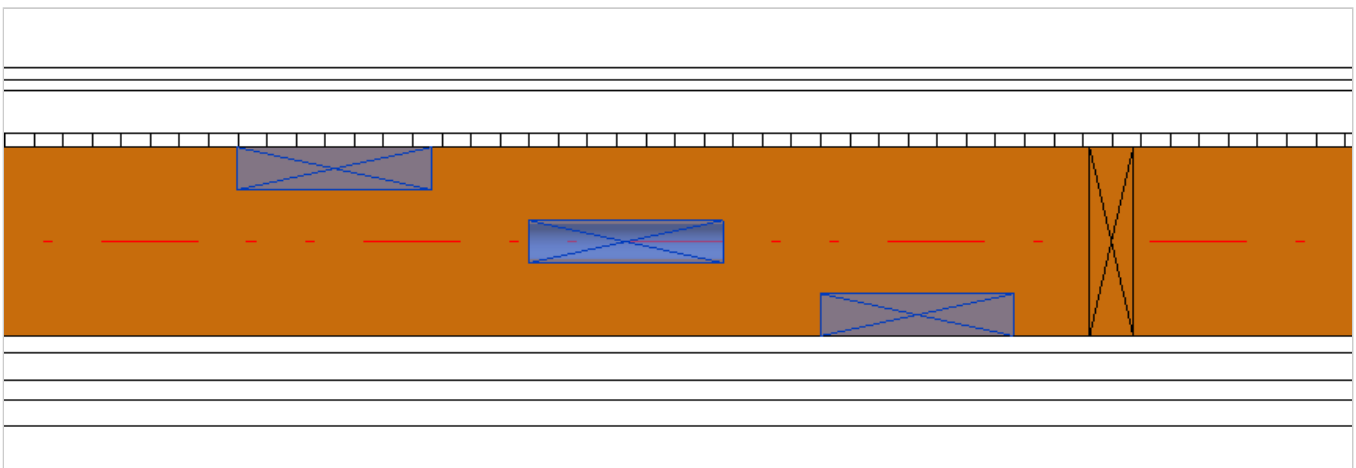
Position – stud/joist can be positioned along the **Center, External, Internal, External Outside, Internal Outside, Center External, Center Internal** wall/floor/roof face, or **Outside Near Connected Wall**. The possible option values depend on **Rotate 90** selected value.

Near Connected Wall – option used if the stud/joist must always be near the side where another wall connects.

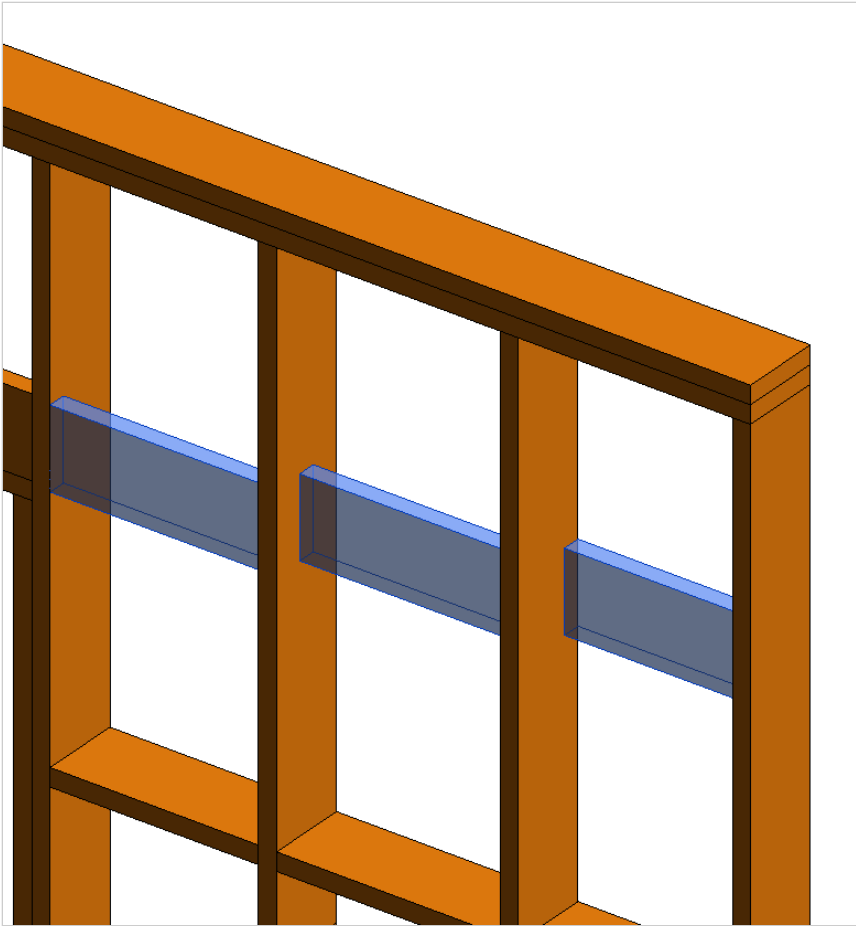


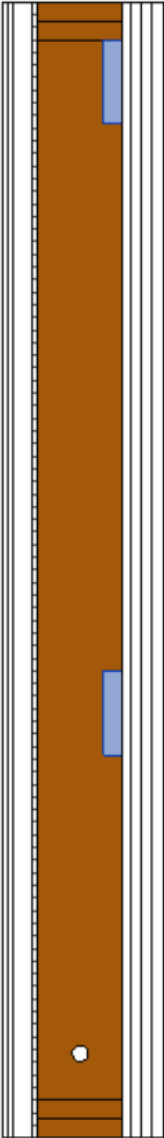
Near Connected Wall + Depth – option used if the stud/joist must always be near the side where other wall/floor/roof connects, and the stud/joist depth must be the same as connected wall/floor/roof layer thickness.

Example with floor:



Example with wall:





Align Type

	X-Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts
1	Inner Side	2	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x120	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>

Previous End
 Previous Start
 Core Inside
 Core Outside

Symbolic Preview

Align Type – the selected stud/joist can be aligned with the previous stud's/joist's End or Start, core inside or core outside.

	Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1	Standard	1	L_Wall_Frame Stud : LMBR 2x6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	None
2	Standard	1	L_Wall_Frame Stud : LMBR 2x4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2"	Internal	Previous End
3	Standard	1	L_Wall_Frame Stud : LMBR 2x6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0"	External	Previous End

Symbolic Preview

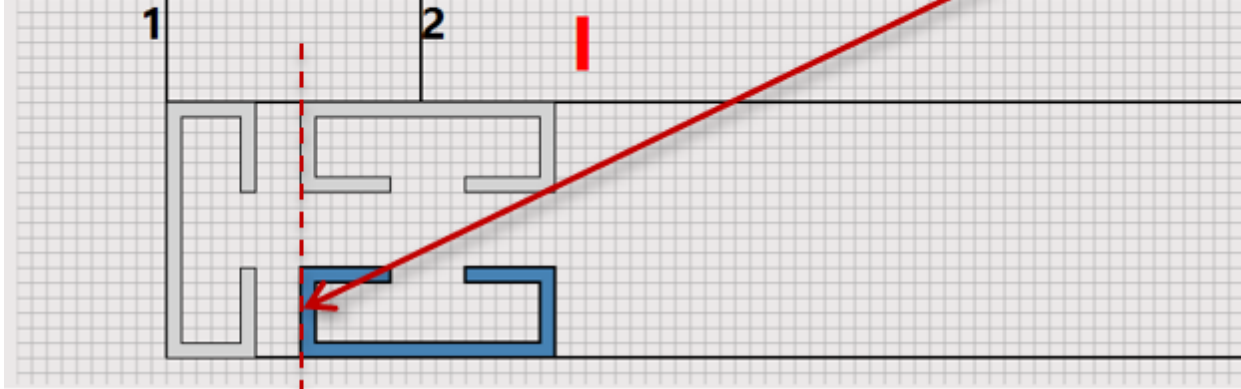
	Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1	Standard	1	L_Wall_Frame Stud : LMBR 2x6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	None
2	Standard	1	L_Wall_Frame Stud : LMBR 2x4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2"	Internal	Previous End
3	Standard	1	L_Wall_Frame Stud : LMBR 2x6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0"	External	Previous Start

Symbolic Preview

Example with metal:

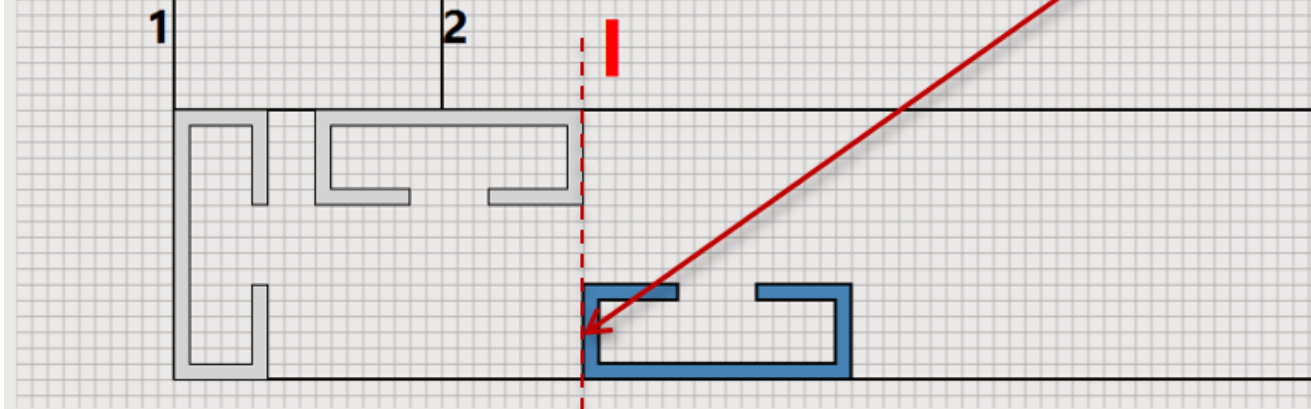
	Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1	Standard	1	L_MF Stud-Joist : 600S162-43	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	None
2	Standard	1	L_MF Stud-Joist : 600S162-43	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2"	Internal	Previous End
3	Standard	1	L_MF Stud-Joist : 600S162-43	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0"	External	Previous Start

Symbolic Preview



	Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1	Standard	1	L_MF Stud-Joist : 600S162-43	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	None
2	Standard	1	L_MF Stud-Joist : 600S162-43	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2"	Internal	Previous End
3	Standard	1	L_MF Stud-Joist : 600S162-43	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0"	External	Previous End

Symbolic Preview



Samples of various wall joins

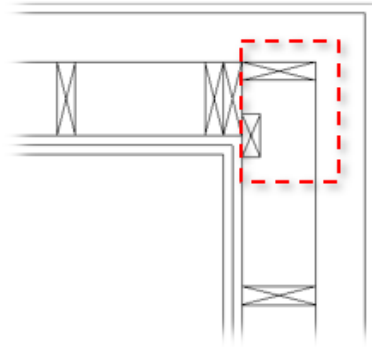
Custom Join
Select from Database: Simple L Connection

Configuration
Configuration Name: Simple L Connection Save to Database Duplicate Delete

New Item Remove Item Move Up Move Down

Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1 Standard	1	L_Wall_Frame Stud : LMBR 2x4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	External	None
2 Side 2 by Center	1	L_Wall_Frame Stud : LMBR 2x4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0"	Near Connected Wall	None

Symbolic Preview



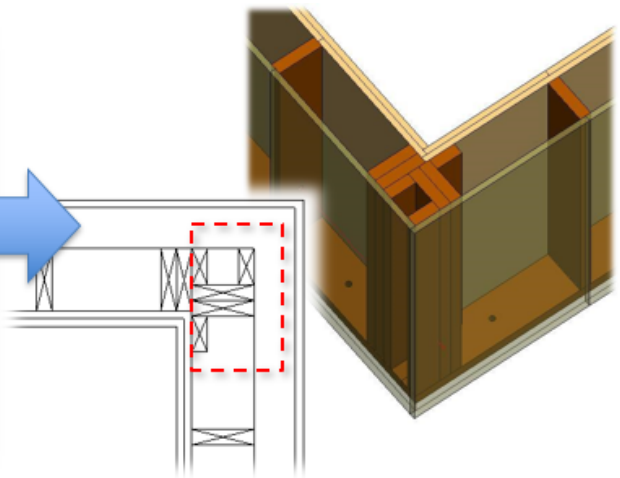
Custom Join
Select from Database: Complex L Connection

Configuration
Configuration Name: Complex L Connection Save to Database Duplicate Delete

New Item Remove Item Move Up Move Down

Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1 Standard	1	L_Wall_Frame Stud : LMBR 2x4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0"	External	None
2 Standard	1	L_Wall_Frame Stud : LMBR 2x4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0"	Internal	Previous Start
3 Standard	2	L_Wall_Frame Stud : LMBR 2x6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	Previous End
4 Standard	1	L_Wall_Frame Stud : LMBR 2x4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0"	Internal	Previous End

Symbolic Preview



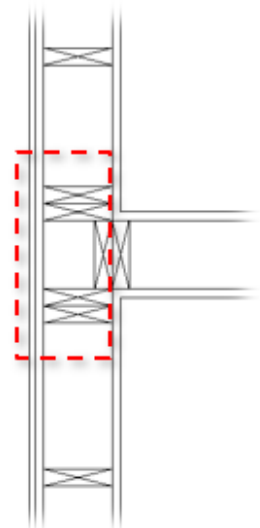
Custom Join
Select from Database: Complex T Connection

Configuration
Configuration Name: Complex T Connection Save to Database Duplicate Delete

New Item Remove Item Move Up Move Down

Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Rotated Position	Align Type
1 Outer Side 1	2	L_Wall_Frame Stud : LMBR 2x6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	None
2 Standard	1	L_Wall_Frame Stud : LMBR 2x6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0"	Near Connected Wall = Depth	Previous End
3 Outer Side 2	2	L_Wall_Frame Stud : LMBR 2x6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0"	Center	None

Symbolic Preview



Extend Start, Extend End, Cuts

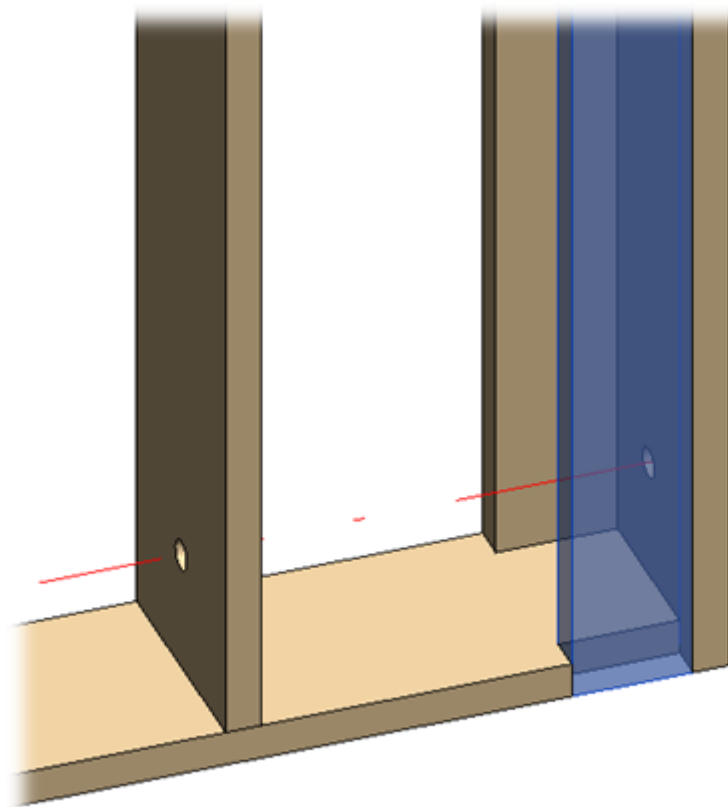
X-Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts
Standard	1	M_WF Stud : LMBR 45x300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None --	In "L" or "T" Stud&Plate Connection	In "L" or "T" Stud&Plate Connection	<input checked="" type="checkbox"/>
Standard	1	M_WF Stud : LMBR 45x300	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previous End	In "L" or "T" Stud&Plate Connection	In "L" or "T" Stud&Plate Connection	<input checked="" type="checkbox"/>
Standard	1	M_WF Stud : LMBR 45x300	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0 mm	External	Previous Start	In "L" or "T" Stud&Plate Connection	In "L" or "T" Stud&Plate Connection	<input checked="" type="checkbox"/>

Symbolic Preview

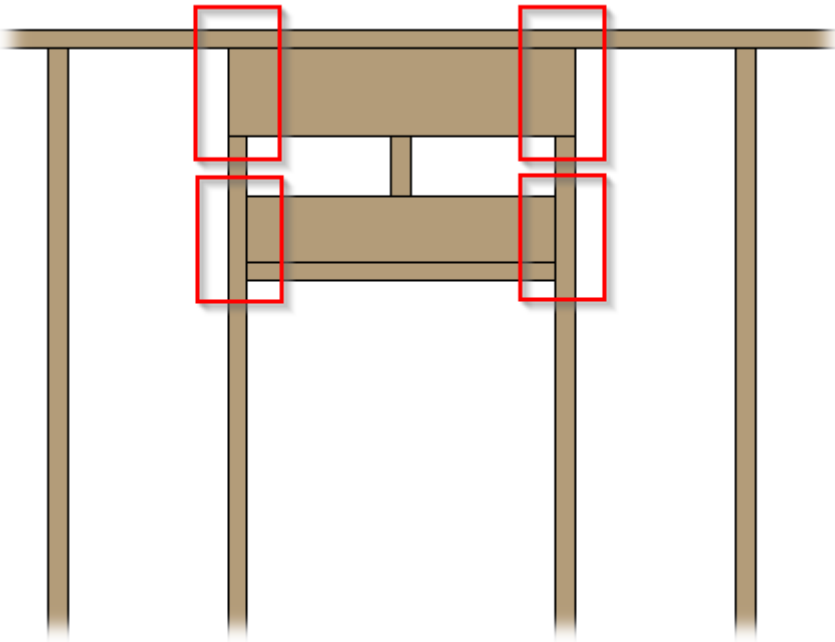
Extend Start, Extend End – controls start/end stud/joist connection with other elements from the wall/floor/roof frame. It can extend and cut both sides of the beam depending on the L or T connection with other beams.

Cut – select if stud/joist should cut the connected plate.

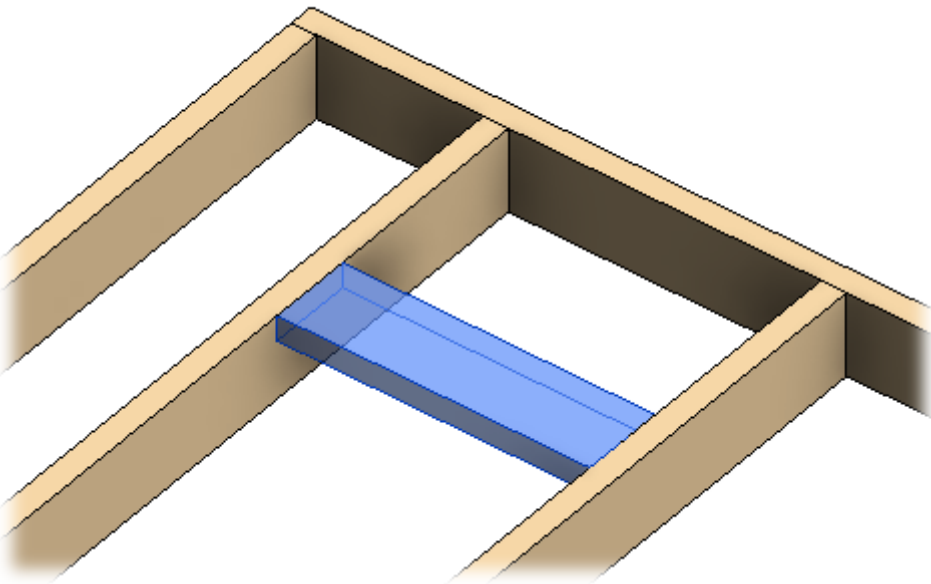
Example: Wall+ finds that end stud/joist is connected with plate in "L" connection. In this case, it is extended in both sides and cuts the plate:



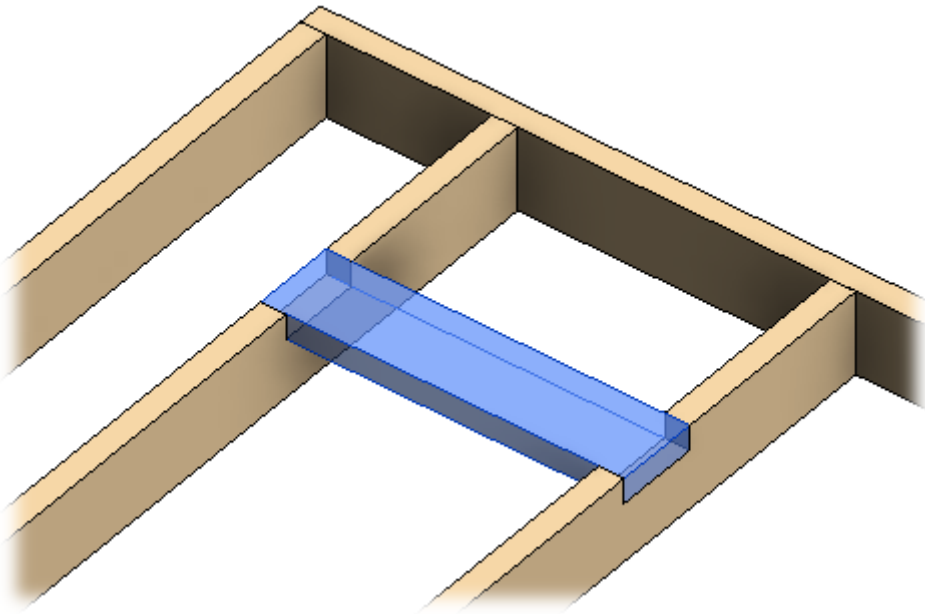
Example: opening Top Support is connected with Trimming Joists in "L" connection. In this case, it is extended on both sides and cut. Header is not extended.



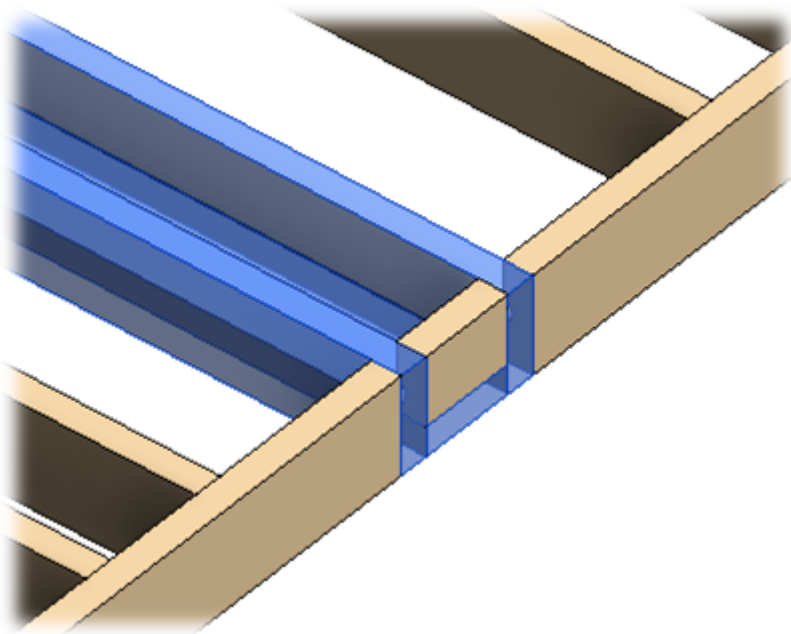
Example with blocking/nogging/bridging: **Extend Ends** is switched OFF:



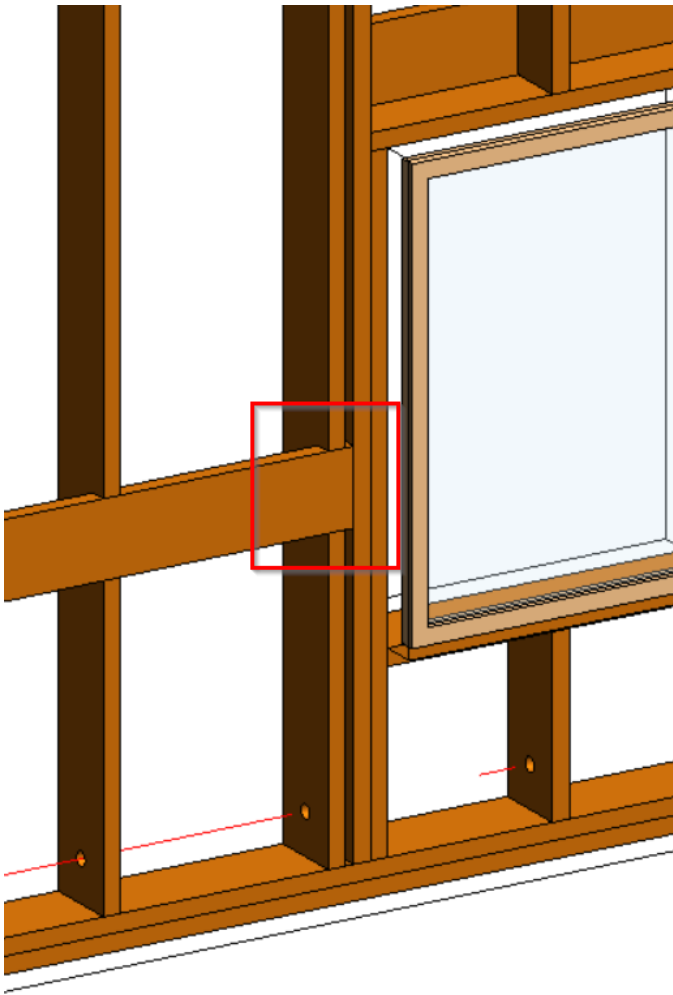
Example with blocking/nogging/bridging: **Extend Ends** is switched ON:



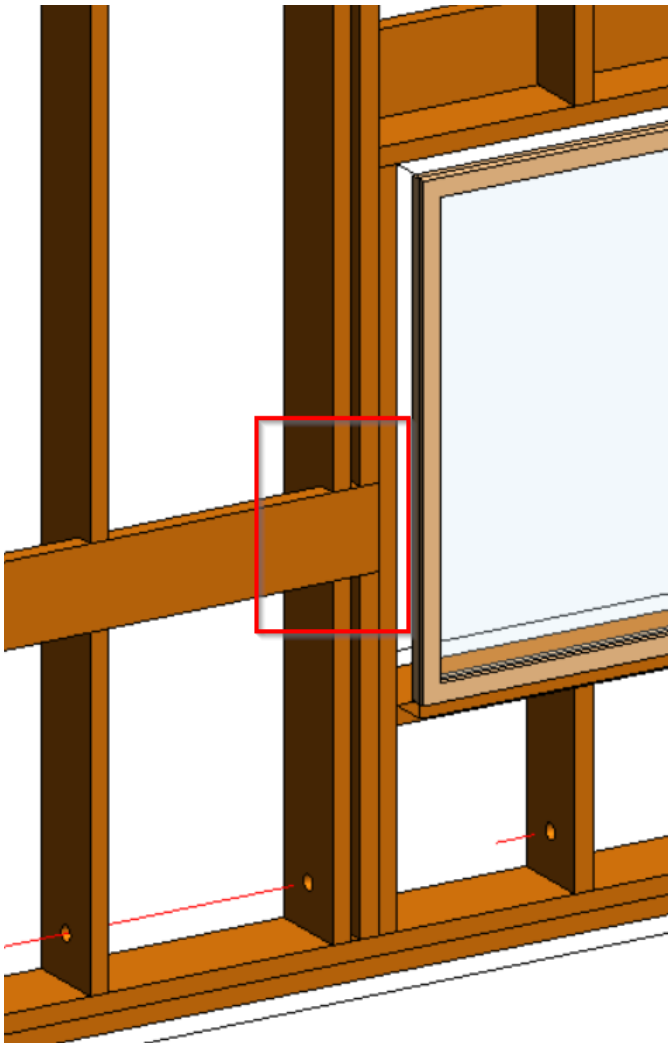
*Example: **Roof+** finds that joists from block are connected with top and bottom plates in "T" connection. In such cases, it is extended and cut.*



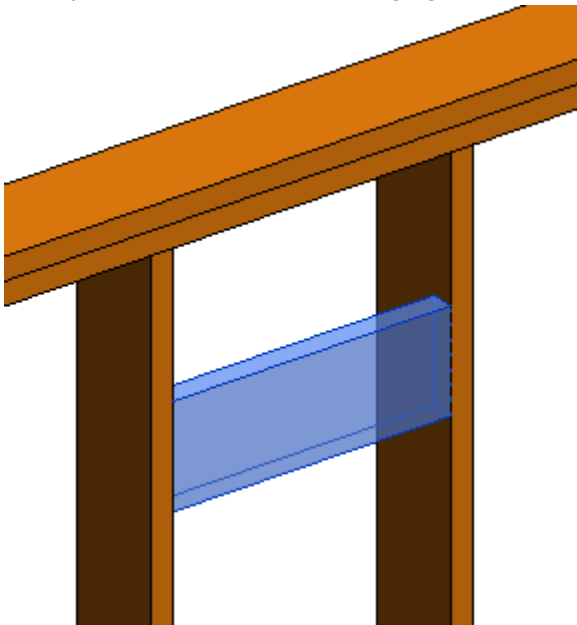
*Example with a wall: when **Extend Ends** is switched OFF...*



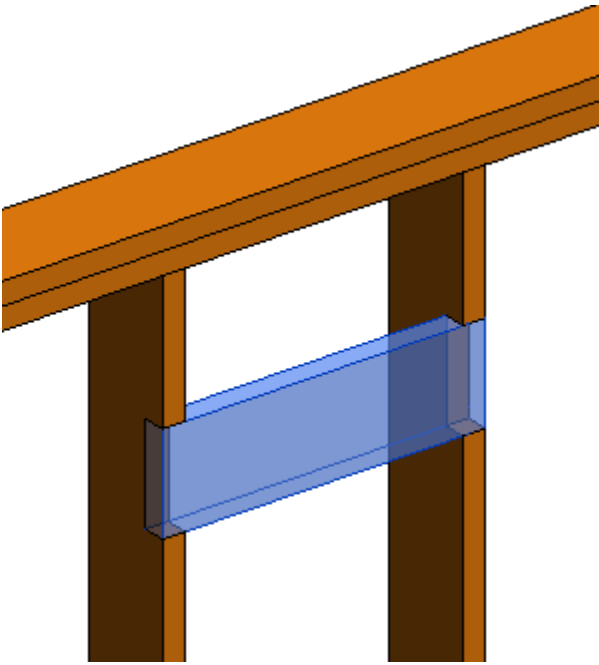
...and when **Extend Ends** is switched ON:



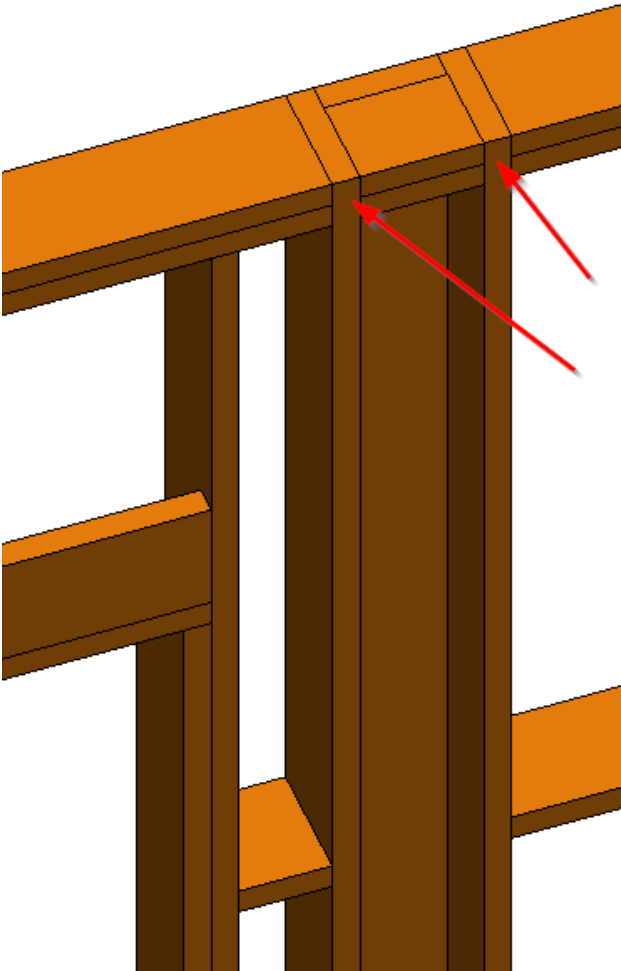
Example with wall additional bridging: **Extend Ends** is switched OFF:



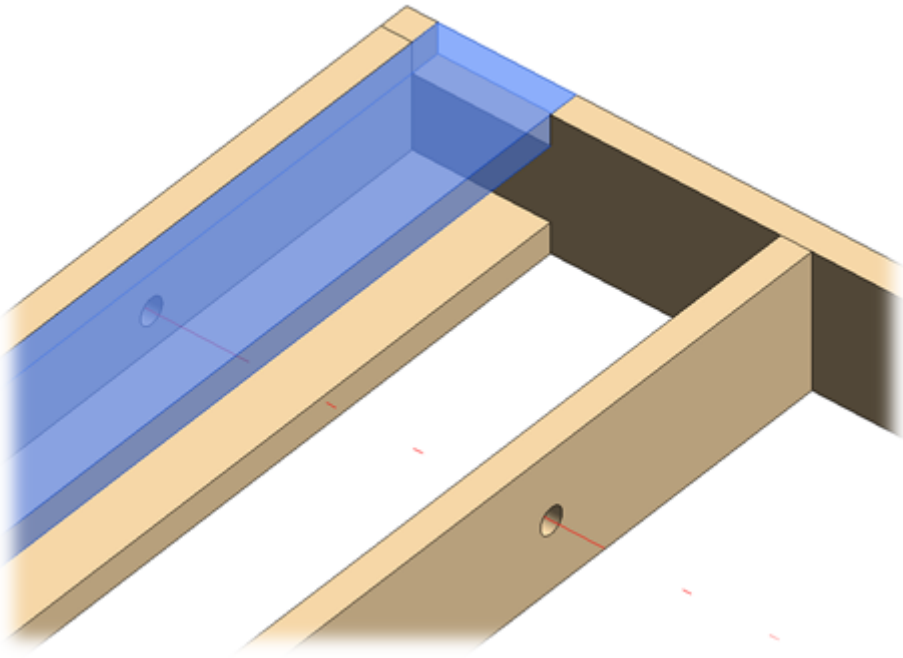
Example with wall additional bridging: **Extend Ends** is switched ON:



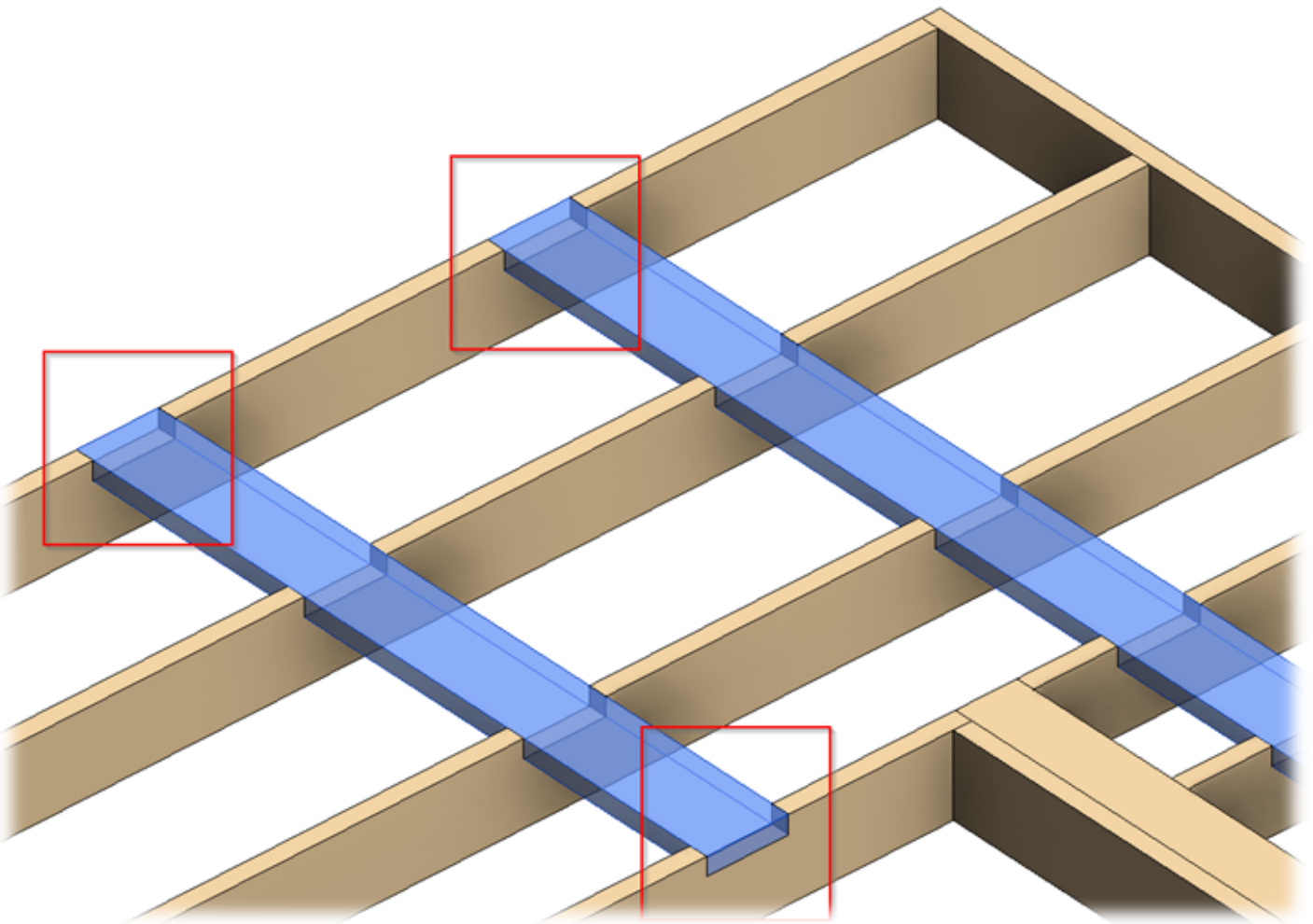
*Example: **Wall+** finds that studs from block are connected with top and bottom plates in "T" connection. In such cases, it is extended and cut.*



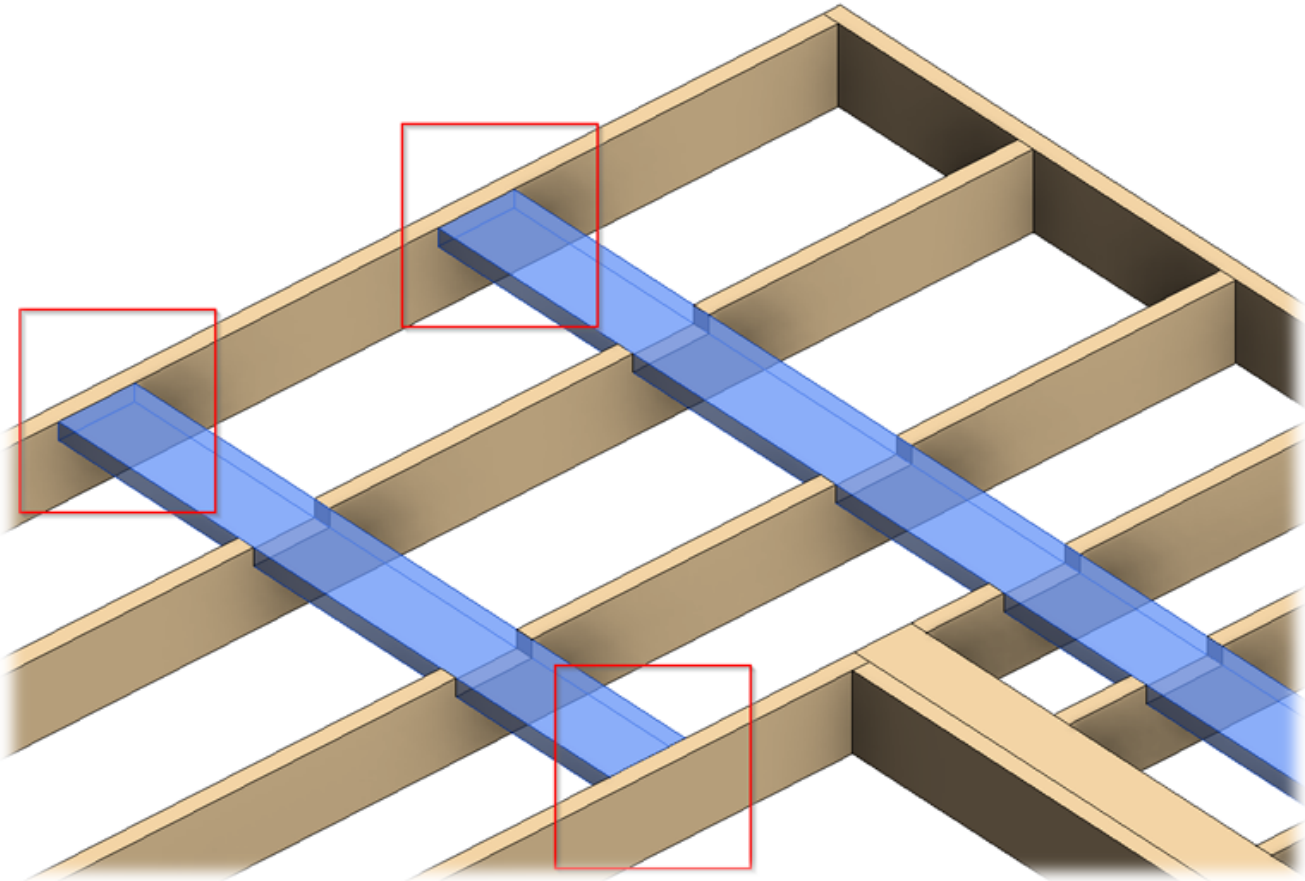
*Example: **Floor+** finds that end joist is connected with rim joist in "L" connection. In this case, it is extended on both sides and cuts:*



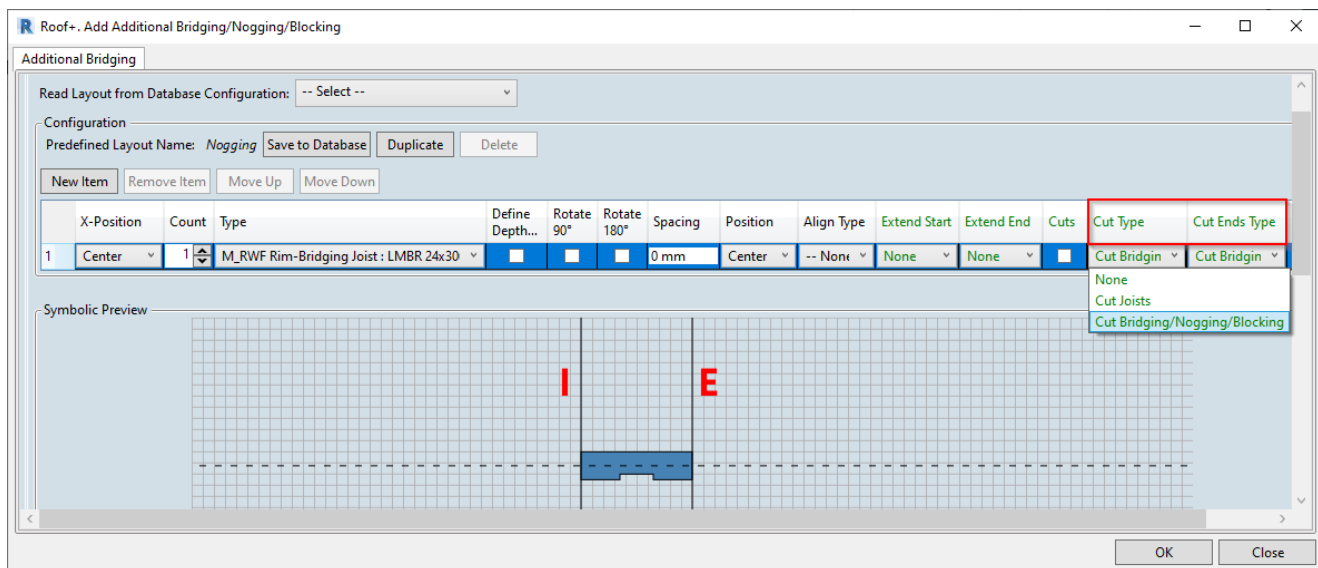
Example with floor: when **Extend Ends** is ON:



Example: when **Extend Ends** is OFF:



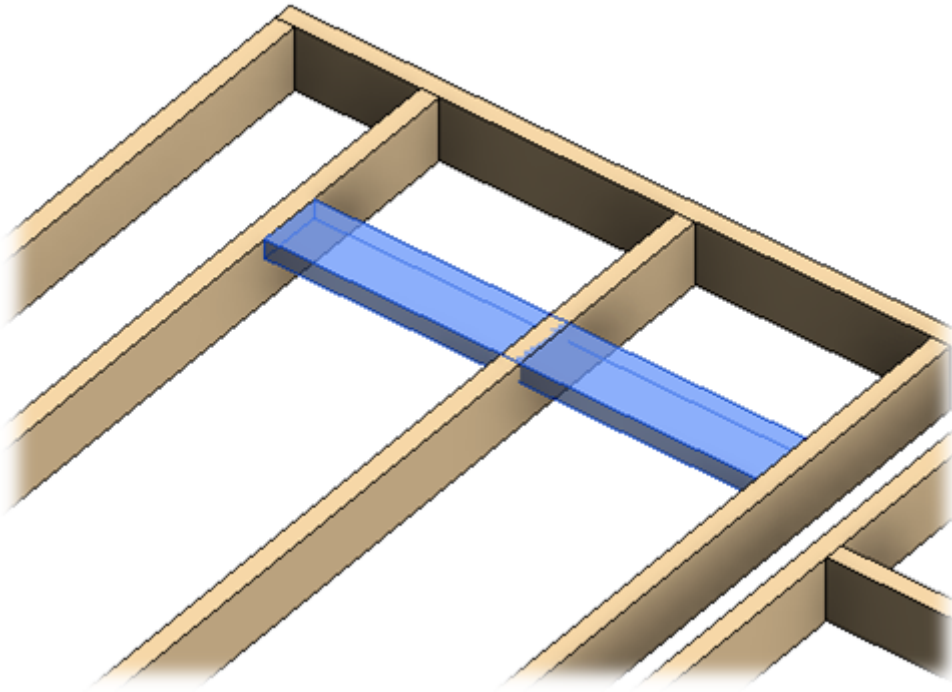
Cut Type



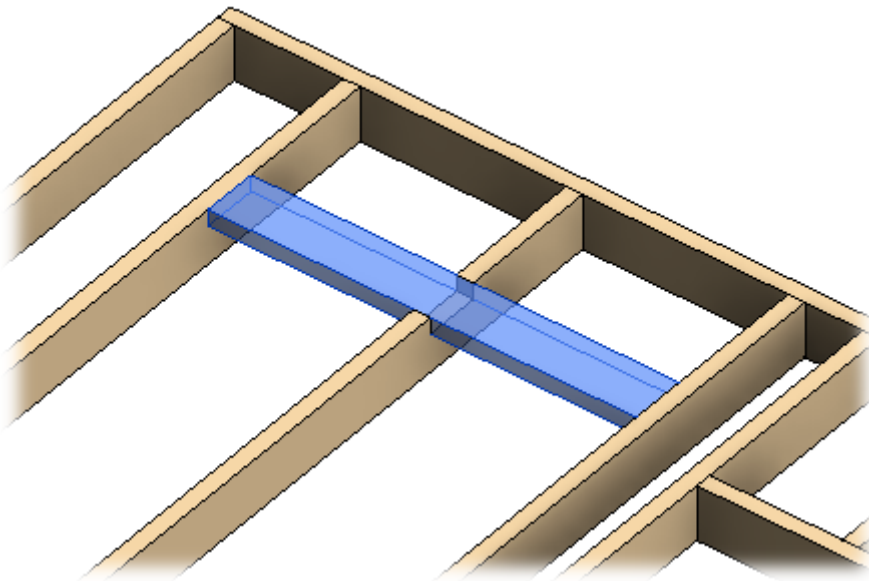
Cut Type – select blocking/nogging/bridging and joist connection cutting type.

Possible options:

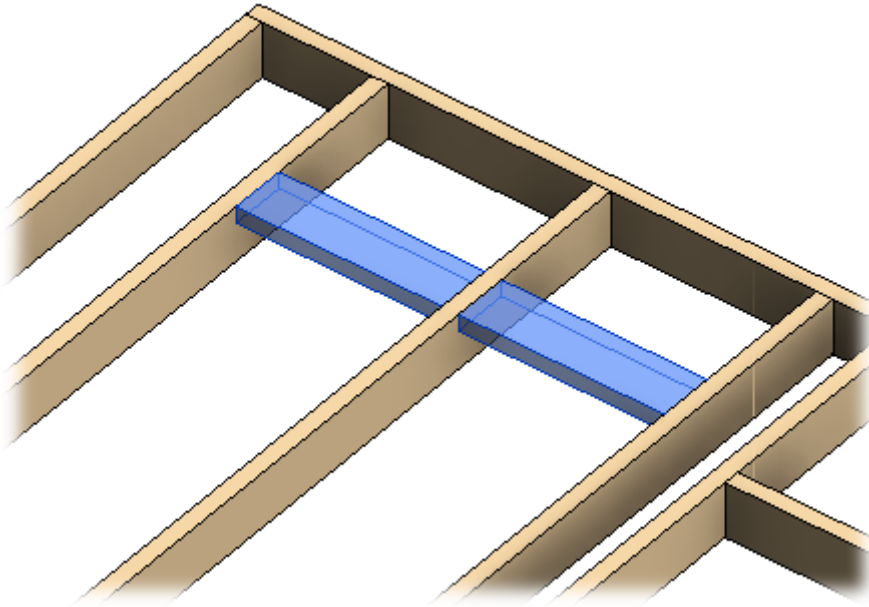
*Example: when **Cut Type** = None*



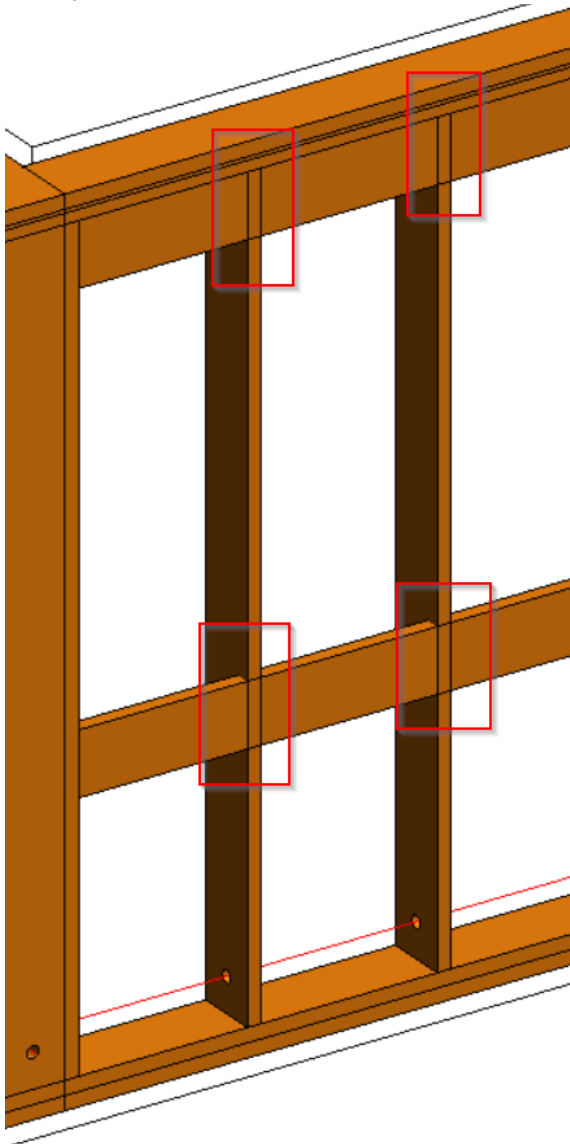
*Example: when **Cut Type = Cut Joists***



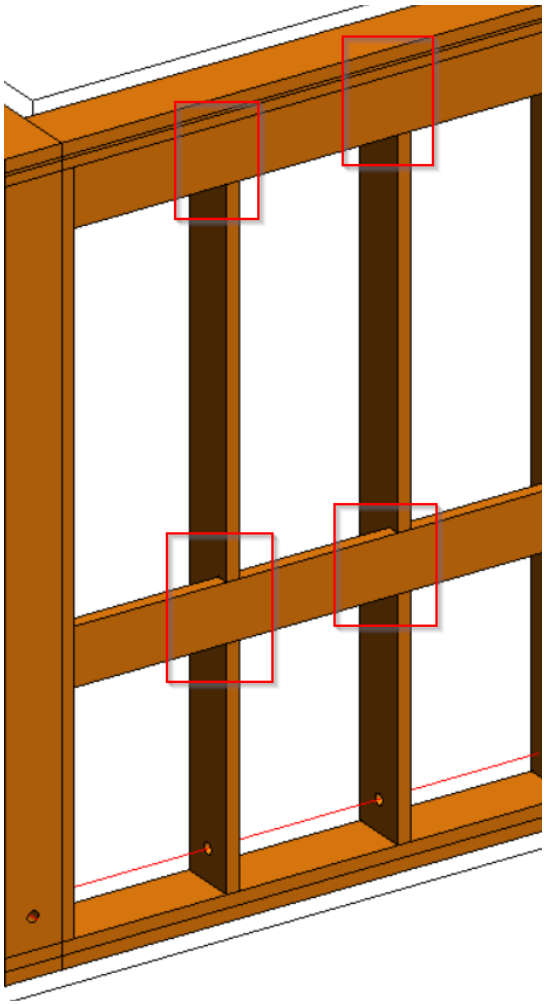
*Example, when **Cut Type = Cut Bridging/Nogging/Blocking***



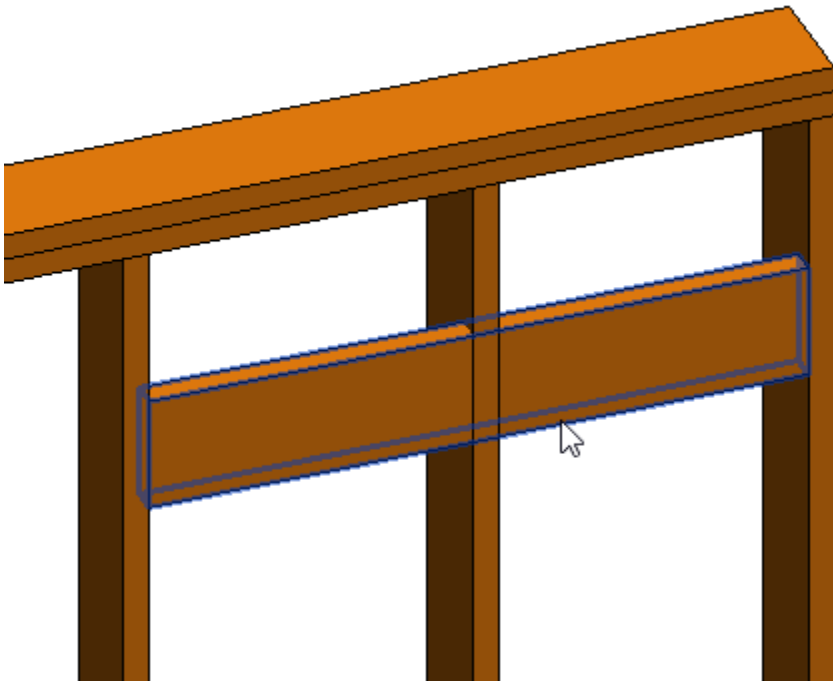
*Example with wall: When **None** is selected:*



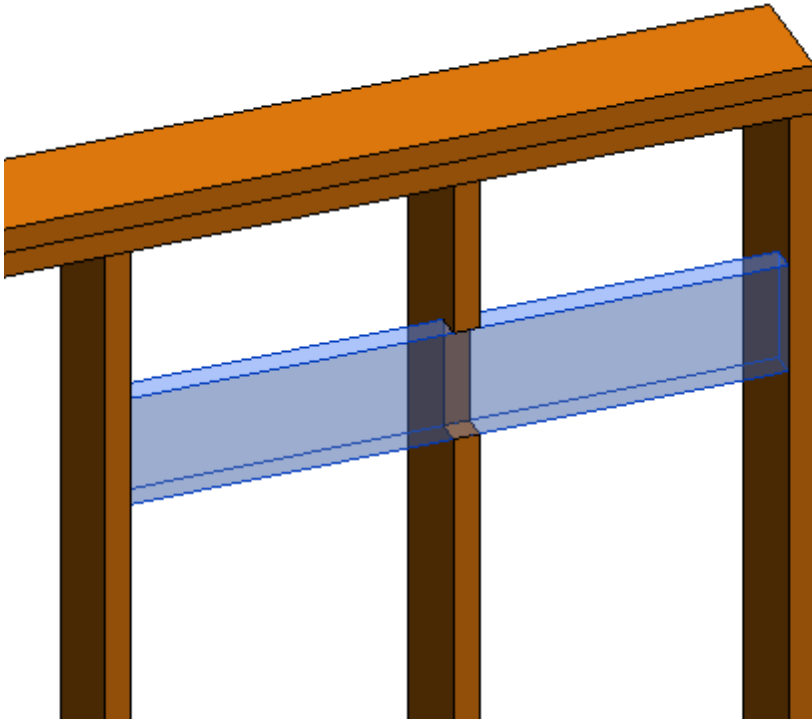
*Example: When **Cut Studs** is selected:*



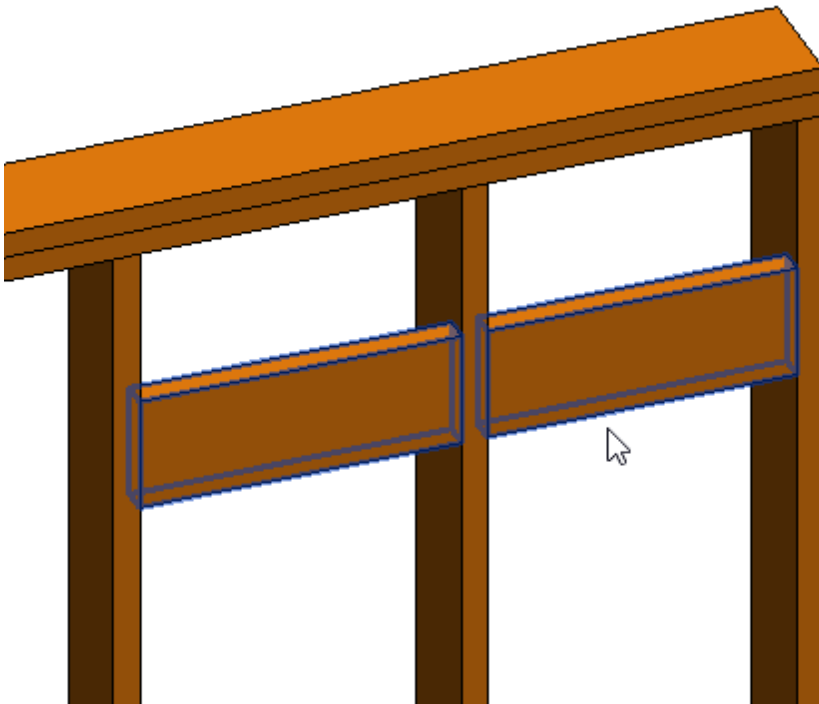
*Example with wall additional bridging: when **Cut Type = Don't Cut***



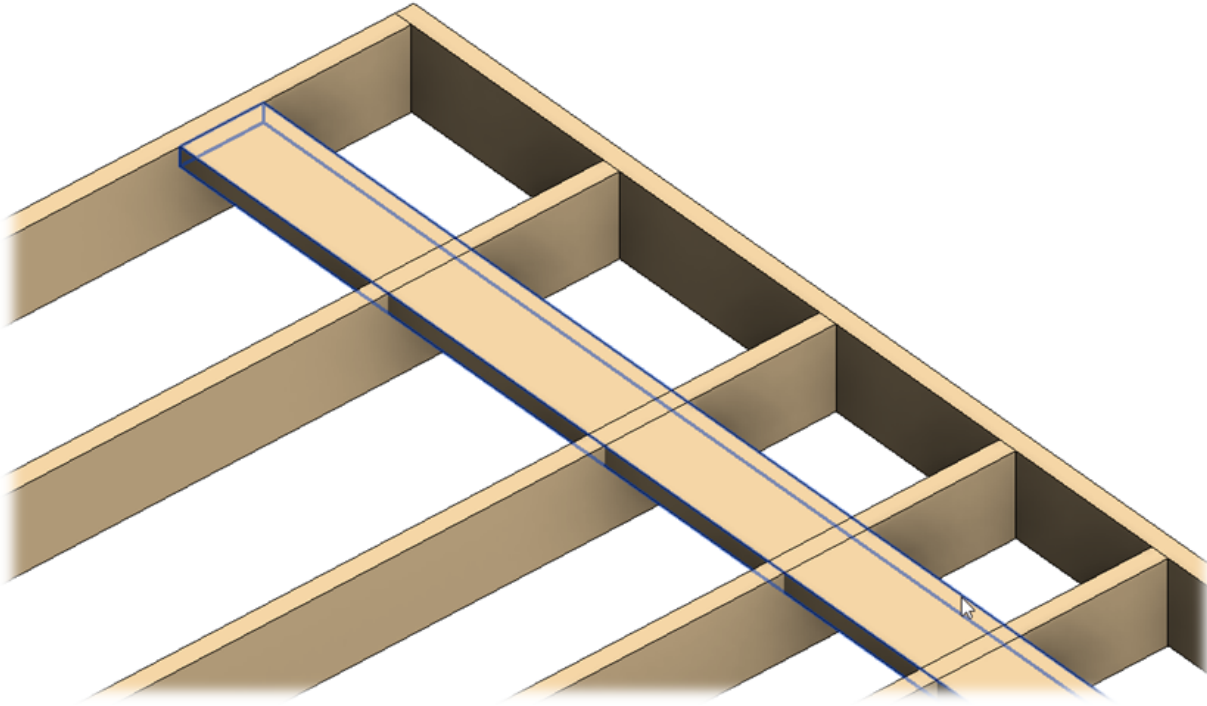
*Example with wall additional bridging: when **Cut Type = Cut Studs***



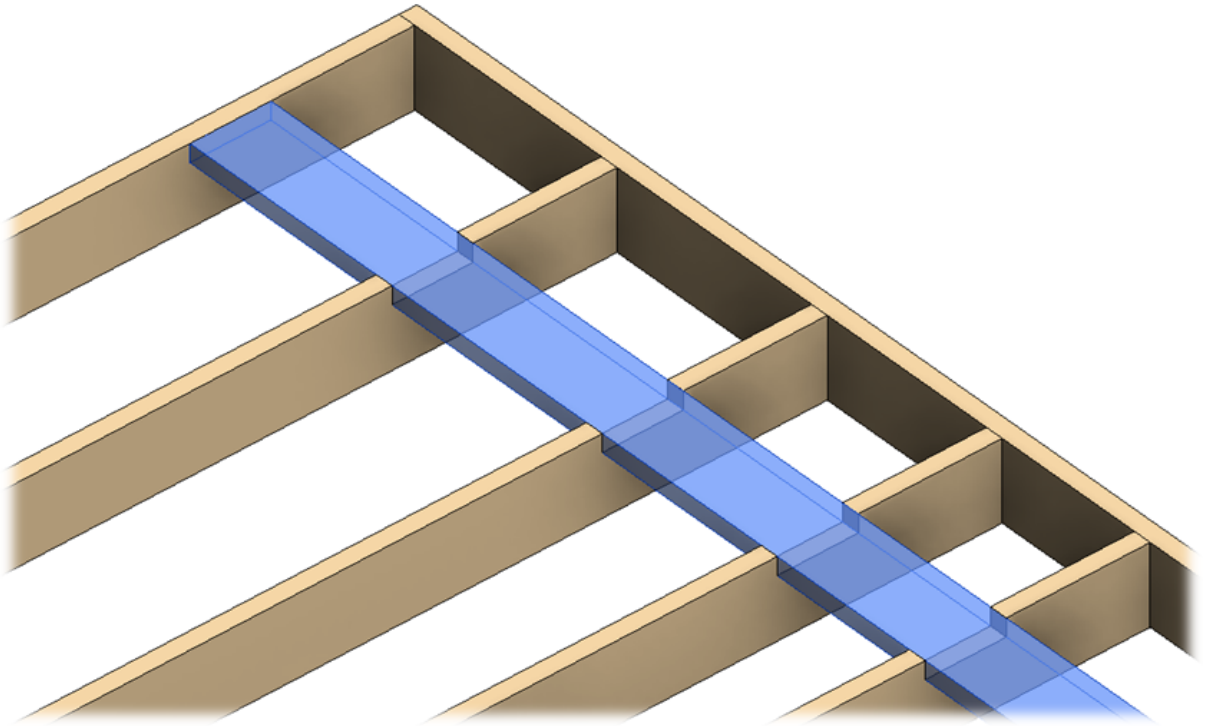
*Example with wall additional bridging, when **Cut Type = Cut Additional Element***



*Example with floor: when **Don't Cut** is selected:*

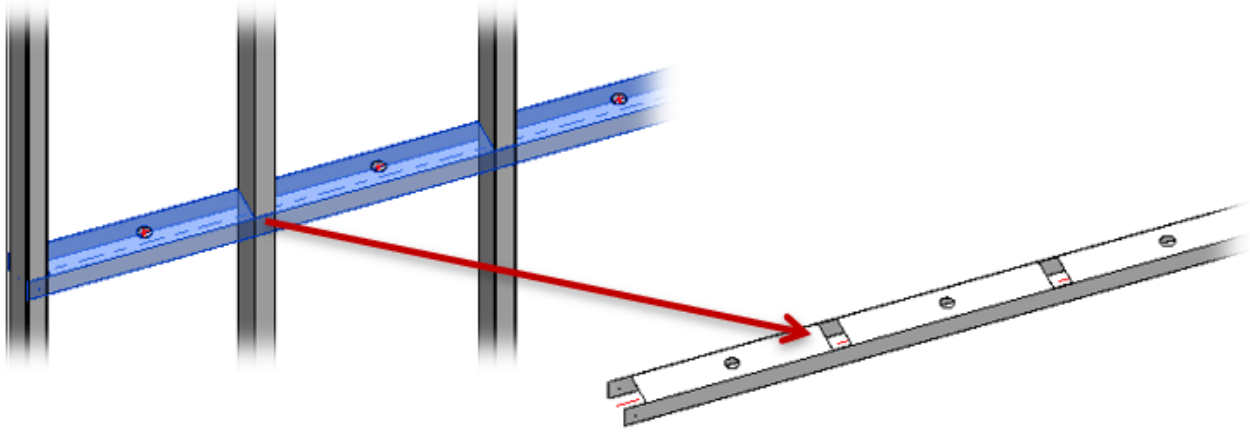


*Example: when **Cut Joists** is selected:*

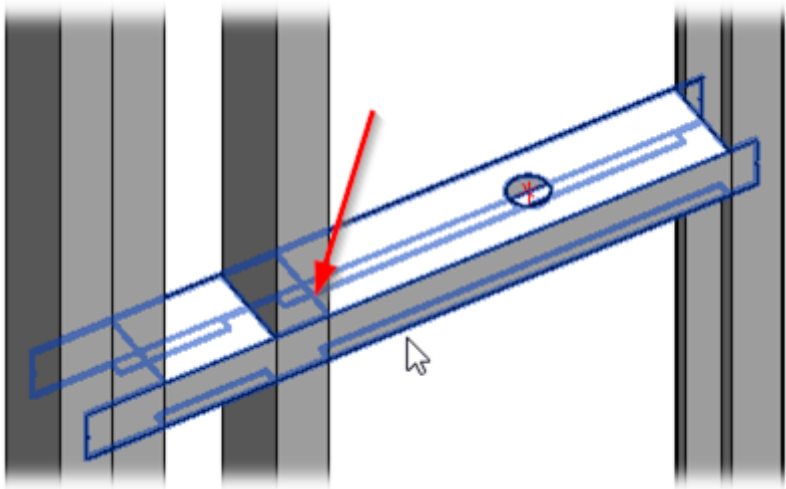


Example with metal wall bridging/nogging:

If Cut Bridging/Nogging is selected



Example with metal wall frame , when *Cut Type = Cut Additional Element*



Cut Ends Type

Secondary Joist System Special Secondary Joist system

X-Position	Count	Type	Define Depth...	Rotate 90°	Flip Facing	Spacing	Position	Align Type	Extend Start	Extend End	Cuts	Cut Type	Cut Ends Type	Build Place
Center	1	M_WF Joist : LMBR 45x150	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input checked="" type="checkbox"/>	Cut Bridgin	Cut Bridgin	<input checked="" type="checkbox"/>

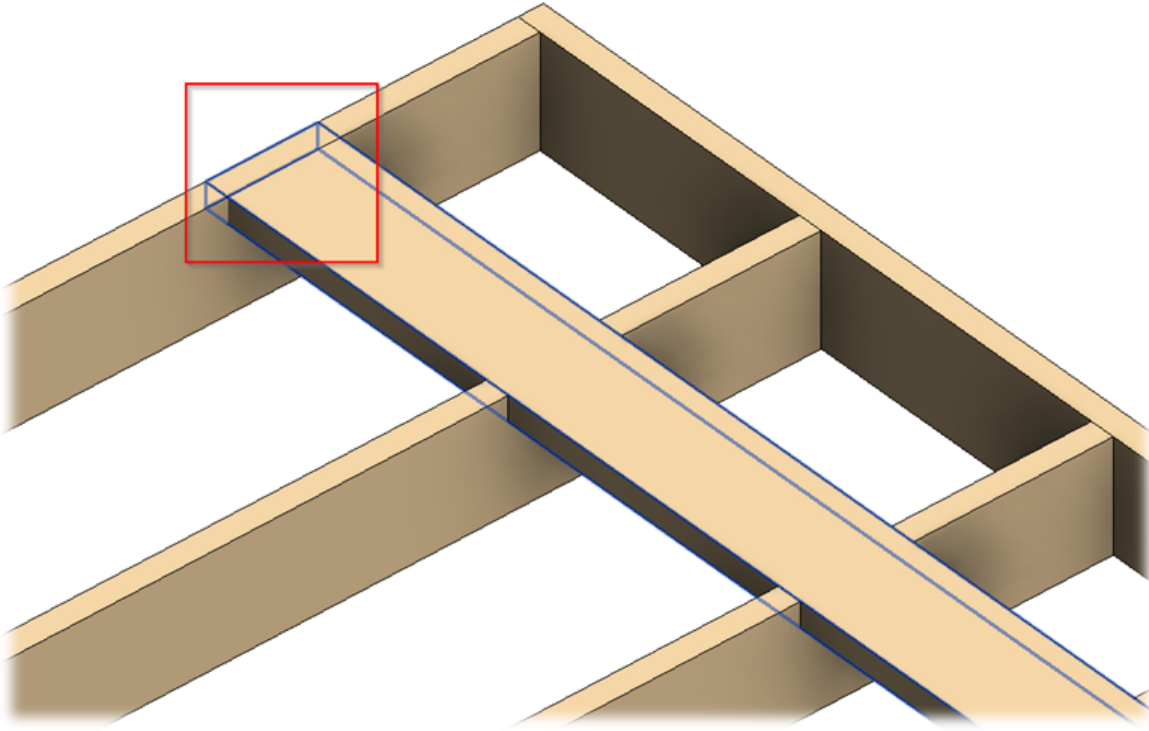
Symbolic Preview

The symbolic preview shows a grid with a vertical dashed line representing the wall. A red 'W' symbol is on the left, and a blue vertical bar is on the right. A red horizontal line is at the bottom left, and a blue vertical bar is at the bottom right. A red arrow points from the 'Cut Ends Type' dropdown menu to the blue vertical bar.

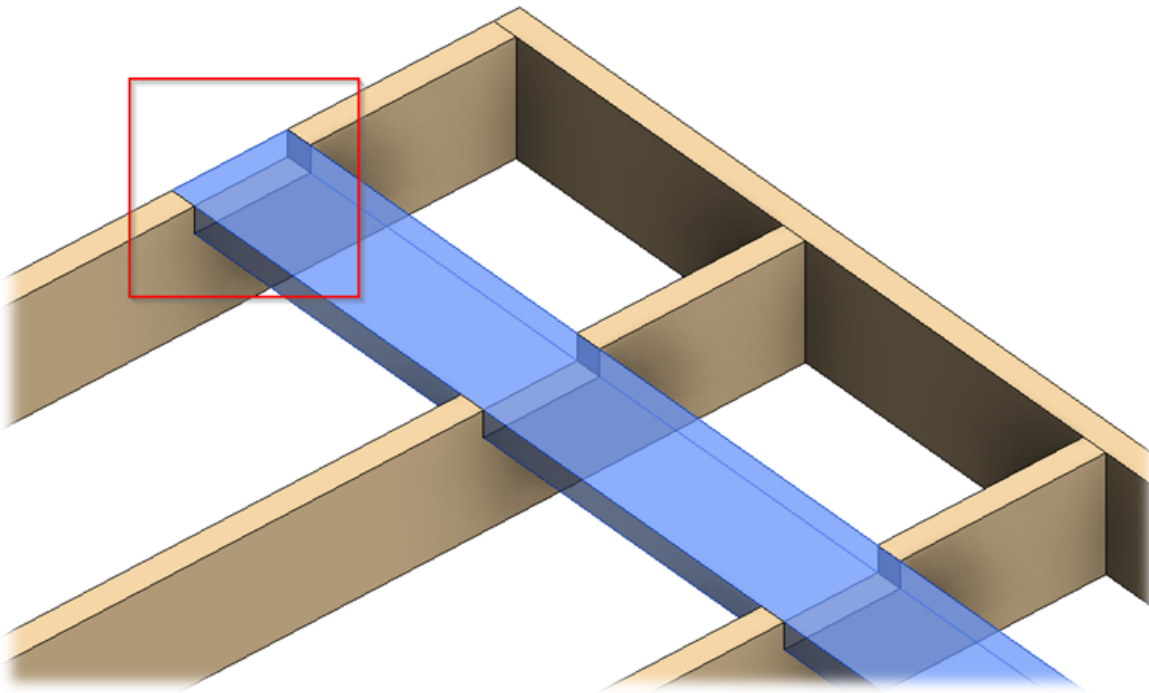
- None
- Cut Joists
- Cut Bridging/Nogging/Blocking

Cut Ends Type – select bridging/nogging end cutting type.

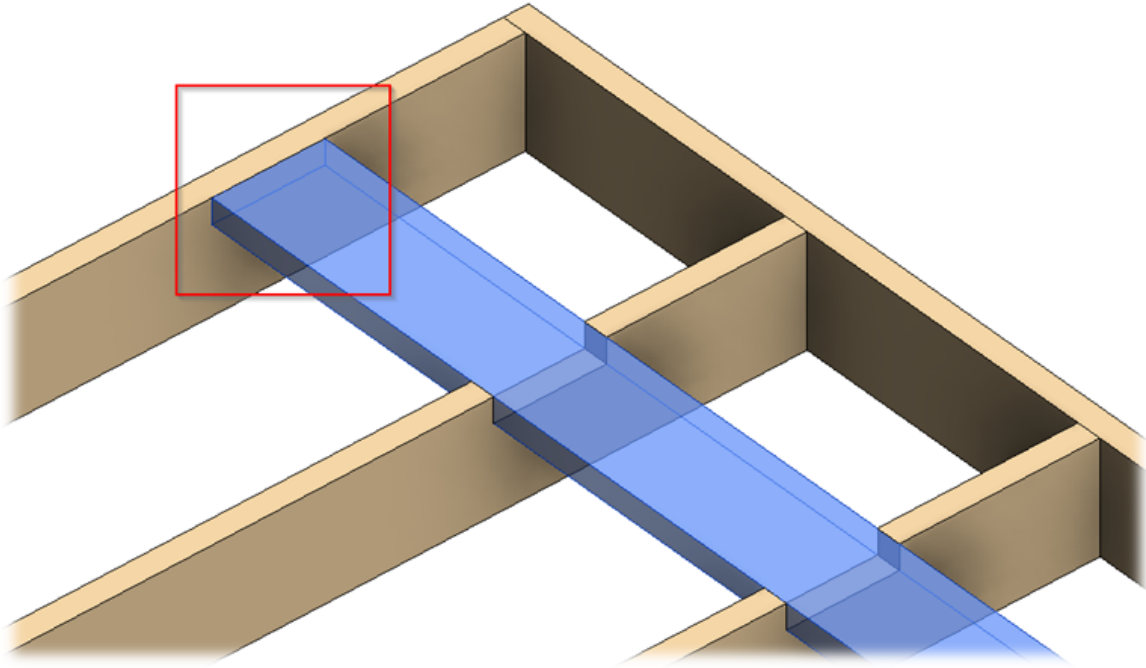
Example: when *Don't Cut* is selected:



*Example: when **Cut Joists** is selected:*



*Example: when **Cut Bridging/Nogging/Blocking** is selected:*



Preassembled

	X-Position	Count	Type	Depth by Core	Rotate 90	Rotate 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts	Pre-assembled	Build in Place	Link to Connected Wall
1	Standard	1	M_WF Stud : LMBR 45x300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x150	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Standard	1	M_WF Stud : LMBR 45x150	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0 mm	Externa	Previou	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Symbolic Preview



Fills information into these parameters:

FM Module Type – writes configuration name.

FM Module Mark – writes **FS** (Frame Start) or **FE** (Frame End) values + **L** (Left) or **R** (Right) + **Mark** (from Wall/Floor/Roof).

FM Module Preassembled – writes Yes/No if element is/is not included into preassembly.

*Example: Free end stud/joist is included into the preassembling so **FM Module Type** parameter has end connection configuration value, **FM Module Mark** parameter contains **FS** (Frame Start) + **L** (Left) + current wall **Mark** value (it can be seen near **FM HostMemberSortMark**).*

Properties

M_WF Stud
LMBR 45x150

Structural Framing (Other) (1) Edit Type

User_Start_Formula	0.0
Volume	0.018 m ³
Elevation at Top	Varies
Elevation at Bottom	Varies

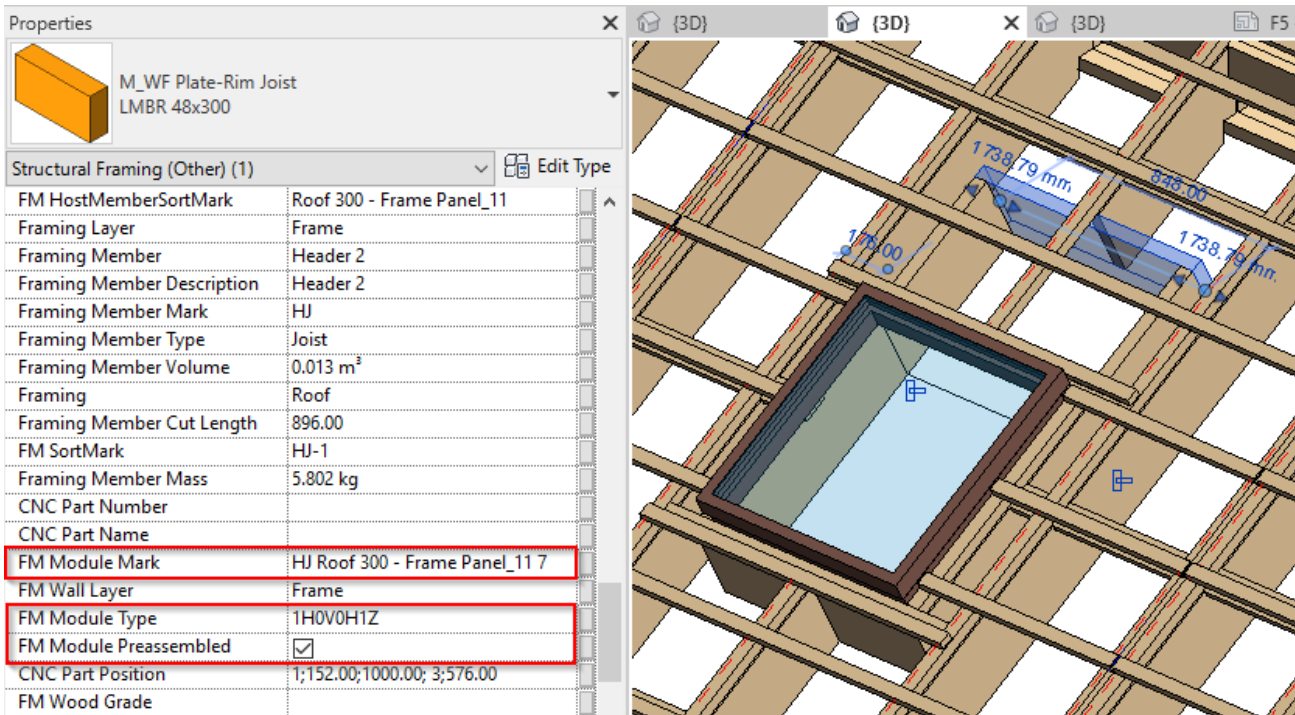
Identity Data

FM HostSortMark	
FM Number of Connectors	0.000000
Image	
Comments	
Mark	
Framing Member	Side Stud
Framing Member Type	Stud
Framing Member Cut Length	2610.0
Framing	Wall
Framing Member Description	Side Stud
FM SortMark	SS-2
Framing Layer	Frame
Framing Member Mark	SS
FM HostMemberSortMark	W-369
Framing Member Mass	
Framing Member Volume	0.018 m ³
CNC Part Number	
CNC Part Name	
FM Module Mark	FS L W-369
FM Wall Layer	Frame
FM Module Type	Default Configuration
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	

Example with roof opening:

FM Module Mark – writes **Framing Member Mark** + **Mark** (from Roof) + **Mark** (from Opening).

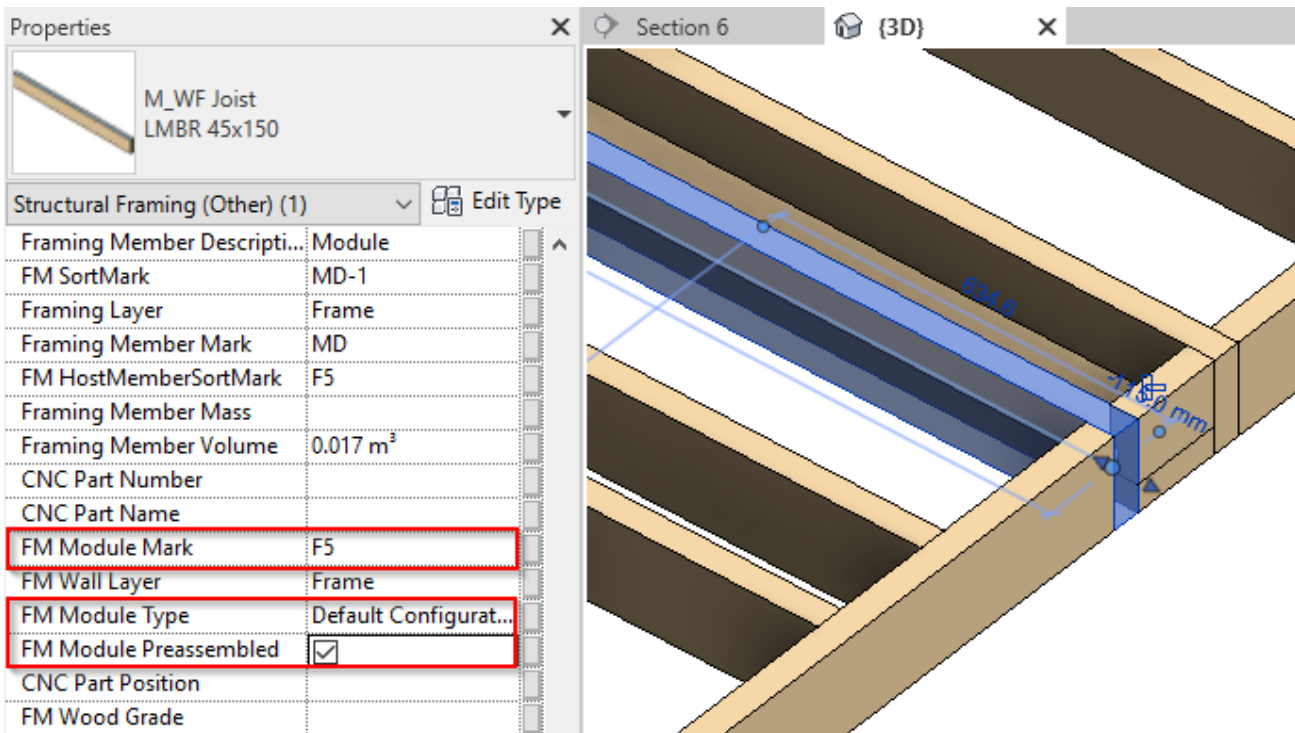
*Opening Header2 is included in the preassembly so **FM Module Type** parameter has opening framing configuration name, **FM Module Mark** parameter contains **Framing Member Mark** parameter value + current roof **Mark** value (can be seen near **FM HostMemberSortMark**) + current window **Mark**.*



Example with floor/roof vertical block:

FM Module Type – writes configuration name.

FM Module Mark – writes roof mark.



Example with wall king stud:

FM Module Type

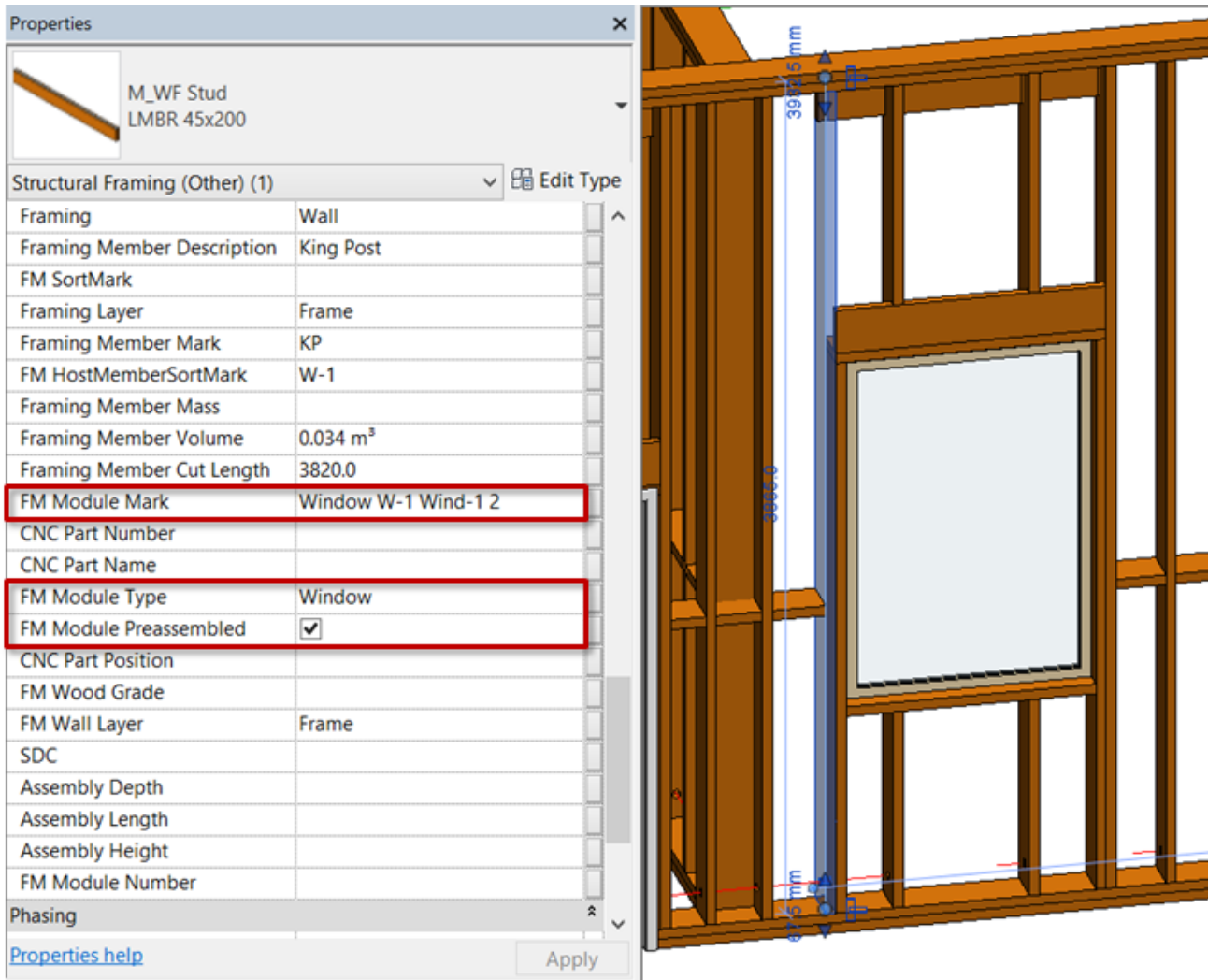
For Windows, Doors and Openings – writes opening type (Window, Door, Opening, JoinedOpening).

For Connections – writes join configuration name.

FM Module Mark – writes **FM Module Type** + **Mark** (from Wall) + **Mark** (from Window, Door or Opening) + unique number.

FM Module Preassembled – writes Yes/No if element is (or is not) included in the preassembly.

King is included in preassembly so **FM Module Type** parameter has Window value because this King belongs to the window, **FM Module Mark** parameter contains **FM Module Type** parameter value (Window) + current wall **Mark** value (it can be seen near **FM HostMemberSortMark**) + current window Mark + unique number.



The screenshot shows the Properties window for an M_WF Stud LMBR 45x200. The window is titled 'Properties' and has a close button (X). The main content area is divided into two sections: a list of properties and a 3D model of a window frame.

The properties list is as follows:

Structural Framing (Other) (1)	
Framing	Wall
Framing Member Description	King Post
FM SortMark	
Framing Layer	Frame
Framing Member Mark	KP
FM HostMemberSortMark	W-1
Framing Member Mass	
Framing Member Volume	0.034 m ³
Framing Member Cut Length	3820.0
FM Module Mark	Window W-1 Wind-1 2
CNC Part Number	
CNC Part Name	
FM Module Type	Window
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	
FM Wall Layer	Frame
SDC	
Assembly Depth	
Assembly Length	
Assembly Height	
FM Module Number	
Phasing	

The 3D model on the right shows a window frame with a king post. Dimensions are indicated: 3912.5 mm for the height of the king post and 3820.0 mm for the length of the stud. The window is shown in a perspective view.

Example with wall vertical block:

FM Module Type – writes configuration name.

FM Module Mark – writes wall mark.

The Properties window shows the following table of properties:

Structural Framing (Other) (1)		Edit Type
Mark		
Framing Member	Module	
Framing Member Type	Module	
Framing	Wall	
Framing Member Description	Module	
FM SortMark		
Framing Layer	Frame	
Framing Member Mark	MD	
FM HostMemberSortMark	W-1	
Framing Member Mass		
Framing Member Volume	0.025 m ³	
Framing Member Cut Length	2820.0	
FM Module Mark	W-1	
CNC Part Number		
CNC Part Name		
FM Module Type	Vertical Block ...	
FM Module Preassembled	<input checked="" type="checkbox"/>	
CNC Part Position		
FM Wood Grade		
FM Wall Layer	Frame	
SDC		

The 3D model shows a vertical window frame with dimensions: 2865.C (height), 2392.5 mm (width), 243.0 mm (width), and 67.5 mm (width).

Example with floor opening:

FM Module Type

For Openings – writes opening type.

For Connections – writes join configuration name.


FM Module Mark – writes **FM Module Type** + **Mark** (from Floor) + **Mark** (from Opening) + unique number.

FM Module Preassembled – writes Yes/No if element is (or is not) included in the preassembly.

Example:

*Header2 is included in preassembly so **FM Module Type** parameter has Opening value, **FM Module Mark** parameter contains **FM Module Type** parameter value (Opening) + current floor **Mark** value (F-1, can be seen near **FM HostMemberSortMark**) + current window **Mark** + unique number.*

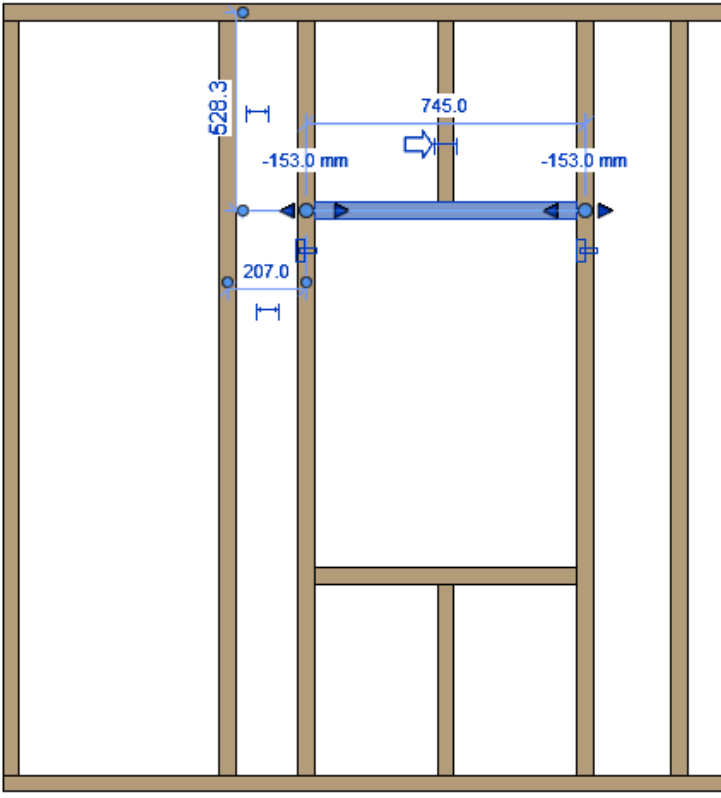
Properties ✕


 M_WF Rim-Bridging Joist
LMBR 45x200

Structural Framing (Other) (1) Edit Type

Comments	
Mark	1.3
Framing Member	Header 2
Framing Member Type	Joist
Framing Member Cut Length	700.0
Framing	Floor
Framing Member Description	Header 2
FM SortMark	
Framing Layer	Frame
Framing Member Mark	HJ
FM HostMemberSortMark	F-1
Framing Member Mass	
Framing Member Volume	0.006 m ³
CNC Part Number	
CNC Part Name	
FM Module Mark	Opening F-1 1
FM Wall Layer	Frame
FM Module Type	Opening
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	

[Properties help](#) Apply



1 : 25 

Example with floor end connection:

FM Module Type – writes end connection configuration name.

FM Module Mark – writes **FS** (Frame Start) or **FE** (Frame End) values + **L** (Left) or **R** (Right) + **Mark** (from Floor).

FM Module Preassembled – writes Yes/No if element is/is not included into preassembly.

*Example: Edge joist is included into the preassembling, so **FM Module Type** parameter has end connection configuration value, **FM Module Mark** parameter contains **FS** (Floor Start) + **L** (Left) + current floor **Mark** value (it can be seen near **FM HostMemberSortMark**).*

Properties X Level 1 X Section 3 North

M_WF Joist
LMBR 45x200

Structural Framing (Other) (1) Edit Type

Cutback_E	0.0
Cutback_S	0.0
Identity Data	
FM HostSortMark	
FM Number of Connectors	0.000000
Image	
Comments	
Mark	
Framing Member	Edge Joist
Framing Member Type	Joist
Framing Member Cut Length	5710.0
Framing	Floor
Framing Member Description	Edge Joist
FM SortMark	
Framing Layer	Frame
Framing Member Mark	EJ
FM HostMemberSortMark	F-100
Framing Member Mass	
Framing Member Volume	0.051 m ³
CNC Part Number	
CNC Part Name	
FM Module Mark	FS L F-100
FM Wall Layer	Frame
FM Module Type	1Y0X
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	

Example with metal opening king:

FM Module Type

For Windows, Doors, and Openings – writes opening type.

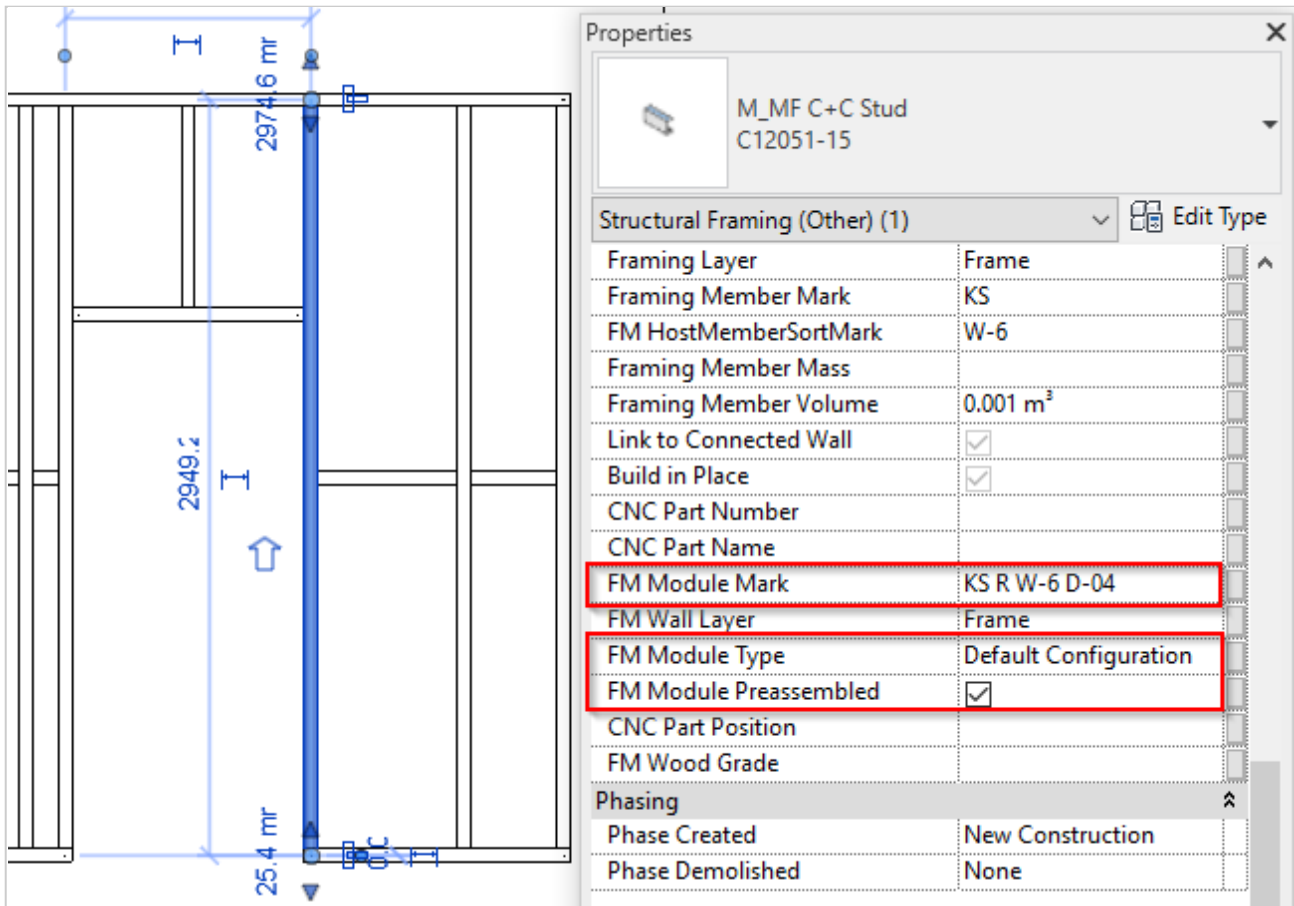
For Connections – writes join configuration name.

FM Module Mark – writes **Framing Member Mark** + **Left** or **Right** + **Mark** (from Wall) + **Mark** (from Window, Door or Opening).

FM Module Preassembled – writes Yes/No if element is (or is not) included in the preassembly.

Example:

King is included in the preassembly so **FM Module Type** parameter has Door value, because this King belongs to the door, **FM Module Mark** parameter contains **Framing Member Mark** parameter value + Right value + current wall **Mark** value (can be seen near **FM HostMemberSortMark**) + current door **Mark**.



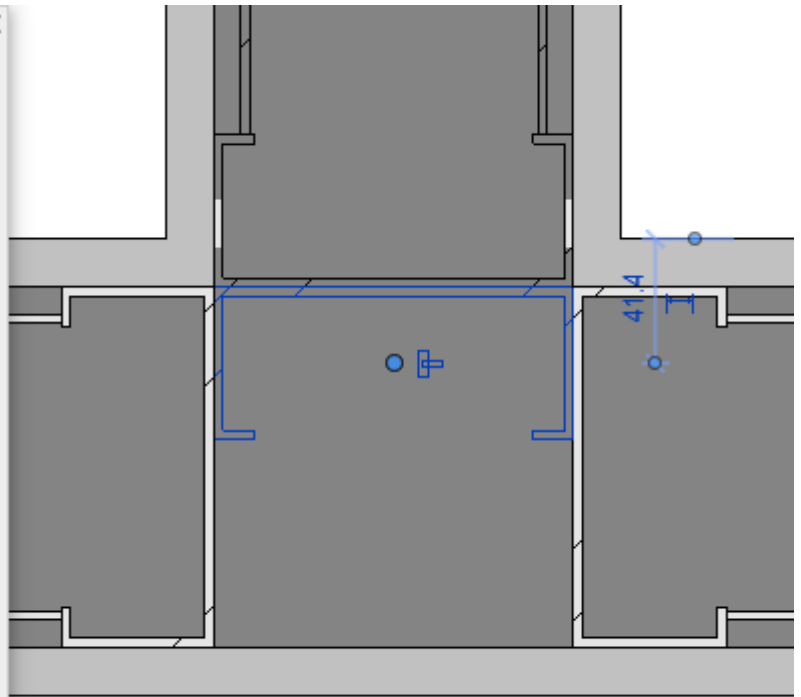
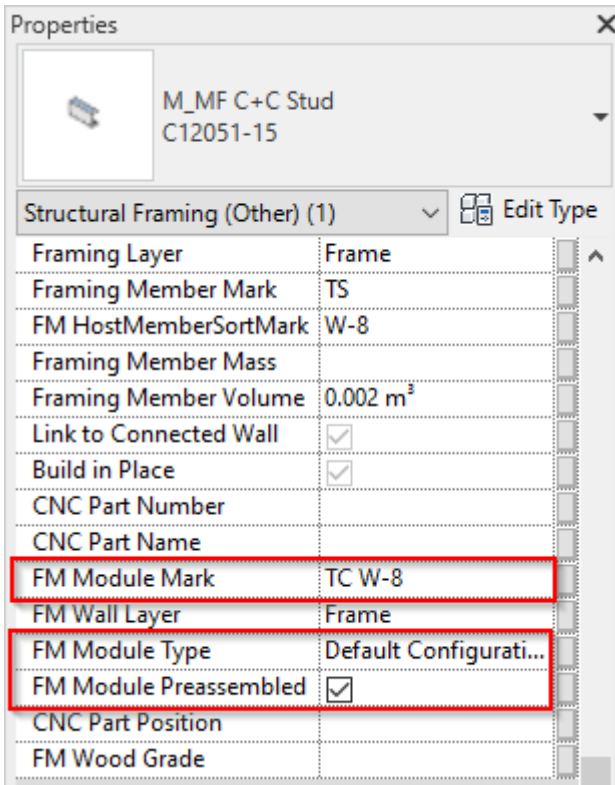
Example with metal T connection:

FM Module Type – writes connection configuration name.

FM Module Mark – writes **FS** (Frame Start), **FE** (Frame End) or **TC** (T Connection) values + **L** (Left) or **R** (Right) + **Mark** (from Wall).

FM Module Preassembled – writes Yes/No if element is/is not included into preassembly.

*Example: T stud is included into the preassembling so **FM Module Type** parameter has T connection configuration value, **FM Module Mark** parameter contains **TC** (T Connection) + current wall **Mark** value (it can be seen near **FM HostMemberSortMark**).*



Example with metal floor opening trimming joist:

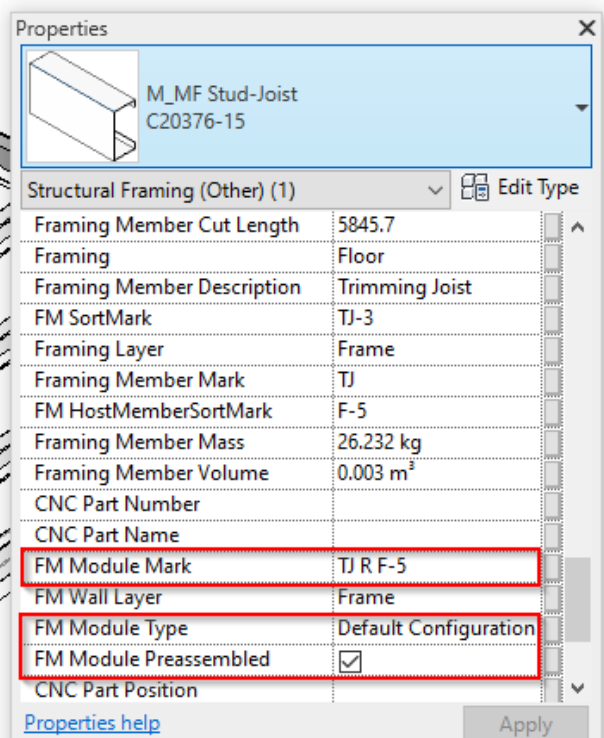
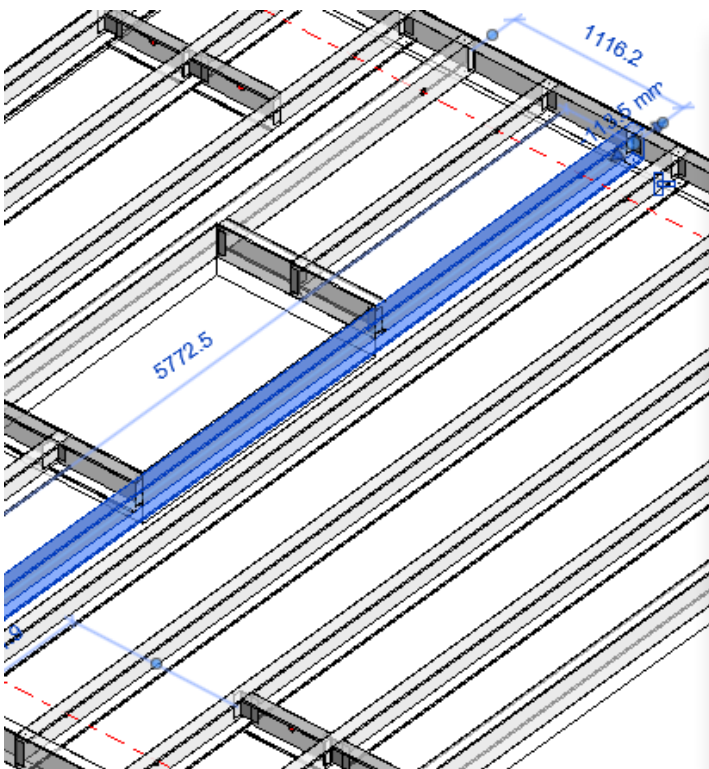
FM Module Type

For Openings – writes opening configuration name.

For Connections – writes join configuration name.

FM Module Mark – writes **Framing Member Mark** + **Left or Right** value + **Mark** (from Floor).

FM Module Preassembled – writes Yes/No if element is (or is not) included in the preassembly.



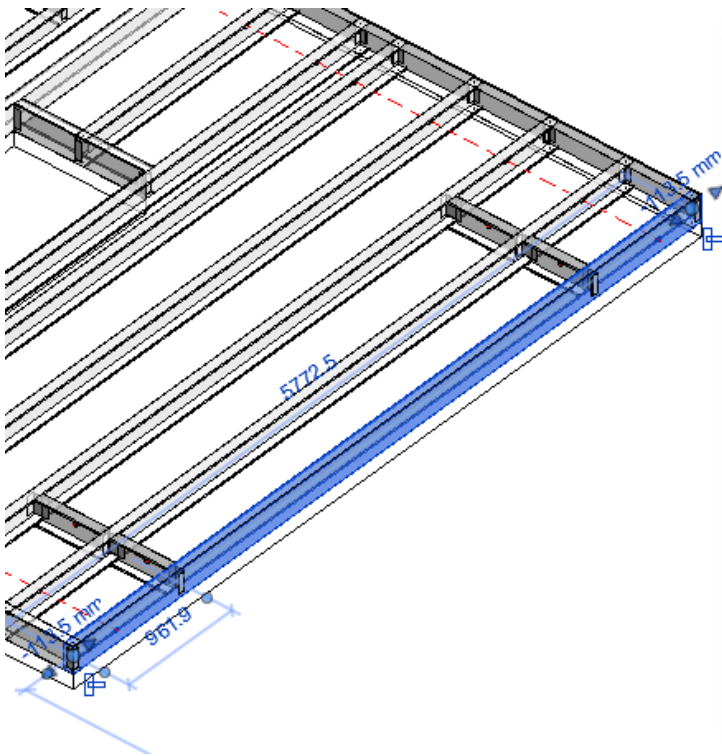
Example with metal floor end connection:

FM Module Type – writes end connection configuration name.

FM Module Mark – writes **FS** (Frame Start) or **FE** (Frame End) values + **L** (Left) or **R** (Right) + **Mark** (from Floor).

FM Module Preassembled – writes Yes/No if element is/is not included into preassembly.

*Example: Edge joist is included into the preassembling, so **FM Module Type** parameter has end connection configuration value, **FM Module Mark** parameter contains **FS** (Floor Start) + **L** (Left) + current floor **Mark** value (it can be seen near **FM HostMemberSortMark**).*



Properties

M_MF Stud-Joist
C20376-15

Structural Framing (Other) (1) Edit Type

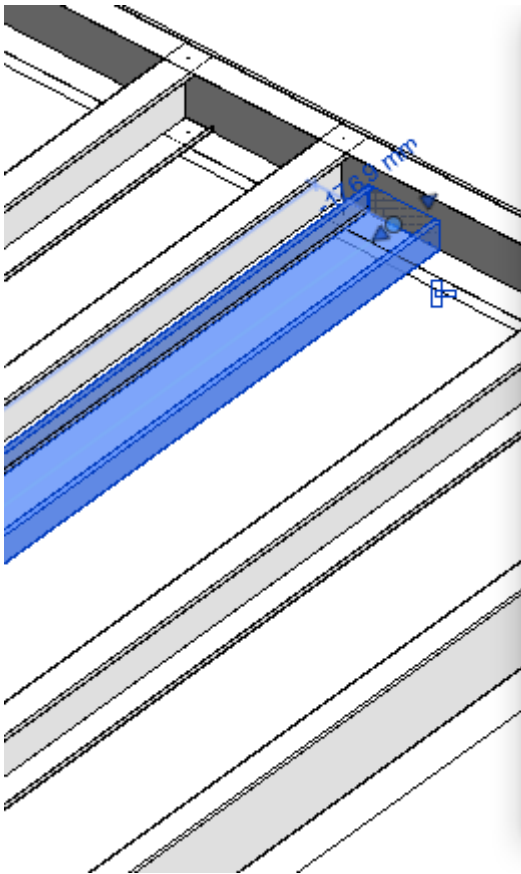
Framing	Floor
Framing Member Description	Edge Joist
FM SortMark	EJ-1
Framing Layer	Frame
Framing Member Mark	EJ
FM HostMemberSortMark	F-5
Framing Member Mass	26.232 kg
Framing Member Volume	0.003 m ³
CNC Part Number	
CNC Part Name	
FM Module Mark	FE R F-5
FM Wall Layer	Frame
FM Module Type	1Y0X
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	

[Properties help](#) Apply

Example with additional floor joist:

FM Module Type – writes configuration name.

FM Module Mark – writes floor mark.



Properties ✕

M_MF Stud-Joist
C20376-15

Structural Framing (Other) (1) Edit Type

Framing Layer	Frame
Framing Member Mark	MD
FM HostMemberSortMark	F-5
Framing Member Mass	
Framing Member Volume	0.003 m ³
CNC Part Number	
CNC Part Name	
FM Module Mark	F-5
FM Wall Layer	Frame
FM Module Type	Default Configuration
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	

Phasing New Construction

[Properties help](#) Apply

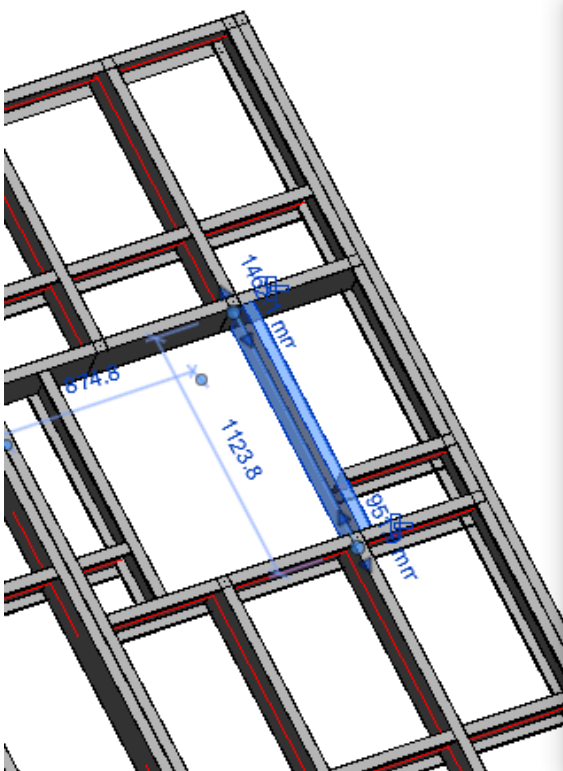
Example with metal roof:

FM Module Type – writes opening type name.

FM Module Mark – writes **FM Module Type** + **Mark** (from Roof) + **Mark** (from Opening) + unique number.

FM Module Preassembled – writes Yes/No if element is (or is not) included in the preassembly.

Example:



Properties ✕

M_MF Stud-Joist
C20351-15

Structural Framing (Other) (1) Edit Type

Mark	
FM Module Type	Window
FM Module Mark	Window Roof 203+3layer_2 W-101 1
FM Module Preassembled	<input checked="" type="checkbox"/>
Framing Member Description	Trimmer Joist
Framing Member Volume	0.001 m ³
Framing Member Type	Joist
Framing Member Mark	TJ
FM SortMark	
Framing Member	Trimmer Joist
Framing	Roof
FM HostMemberSortMark	Roof 203+3layer_2
Framing Layer	Frame
Framing Member Mass	
CNC Part Number	
CNC Part Name	

[Properties help](#) Apply

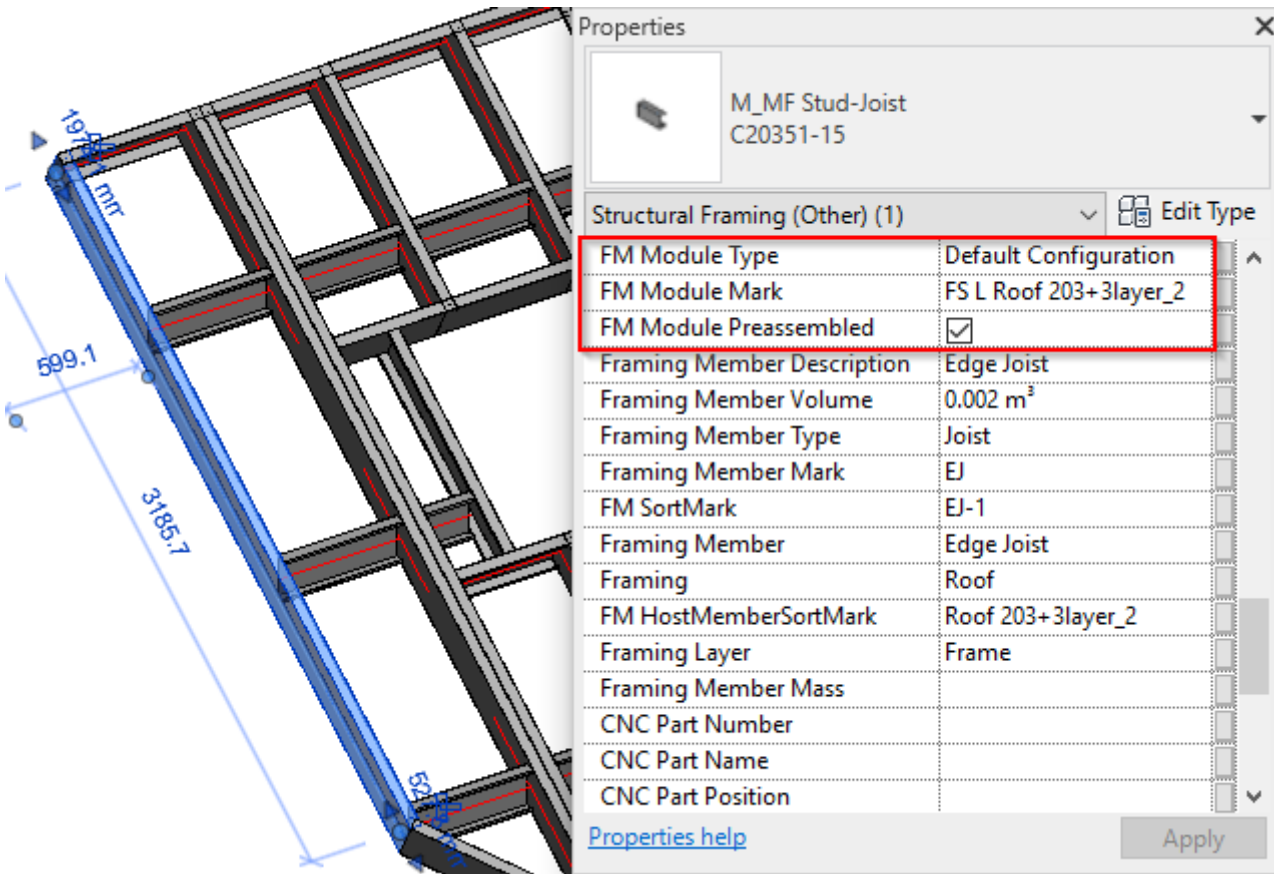
Example with roof edge:

FM Module Type – writes end connection configuration name.

FM Module Mark – writes **FS** (Frame Start) or **FE** (Frame End) values + **L** (Left) or **R** (Right) + **Mark** (from Roof).

FM Module Preassembled – writes Yes/No if element is/is not included into preassembly.

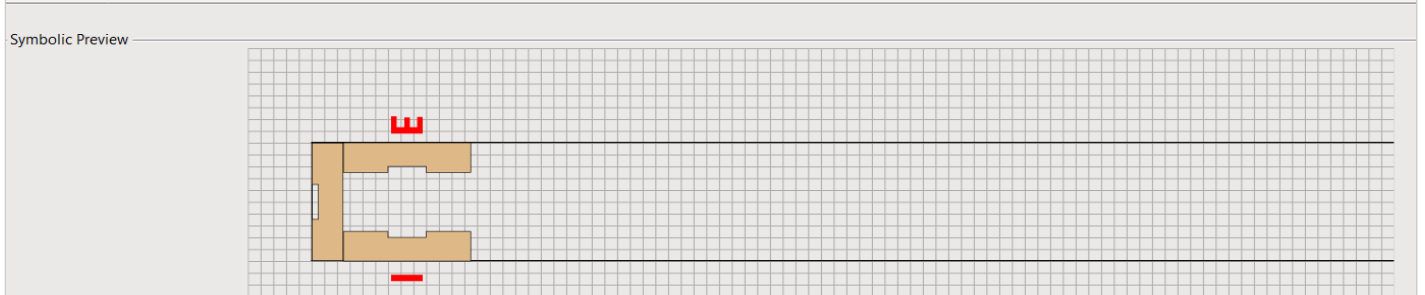
Example: Edge joist is included into the preassembling, so **FM Module Type** parameter has end connection configuration value, **FM Module Mark** parameter contains **FS** (Roof Start) + **L** (Left) + current roof **Mark** value (it can be seen near **FM HostMemberSortMark**).



All these parameters can later be used in the schedules and view filters.

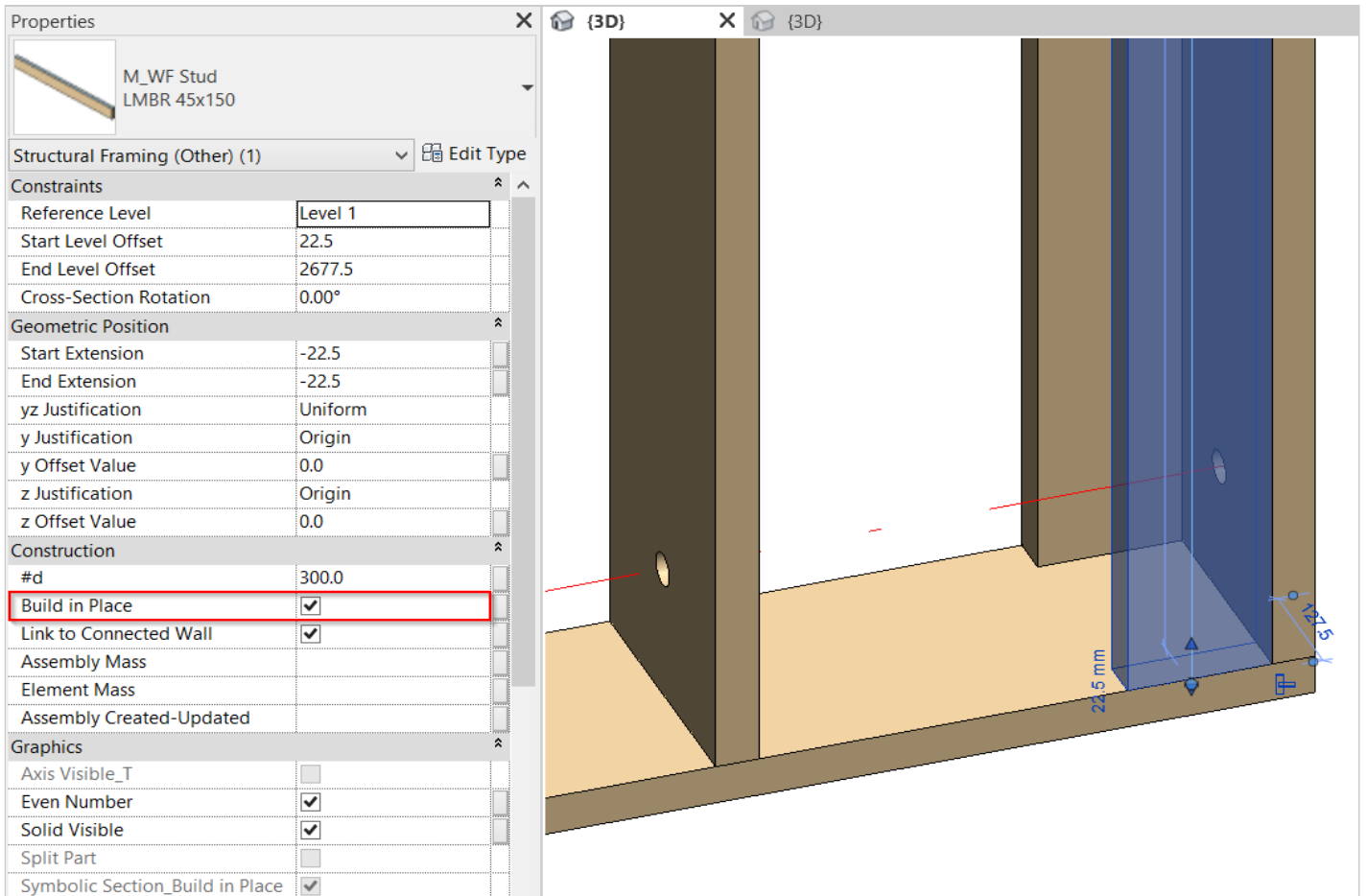
Build in Place

	X-Position	Count	Type	Depth by Core	Rotat e 90	Rotat e 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts	Pre-assembled	Build in Place	Link to Connected W...
1	Standard	1	M_WF Joist : LMBR 45x150	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Standard	1	M_WF Joist : LMBR 45x150	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Standard	1	M_WF Joist : LMBR 45x150	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0 mm	Externa	Previou	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

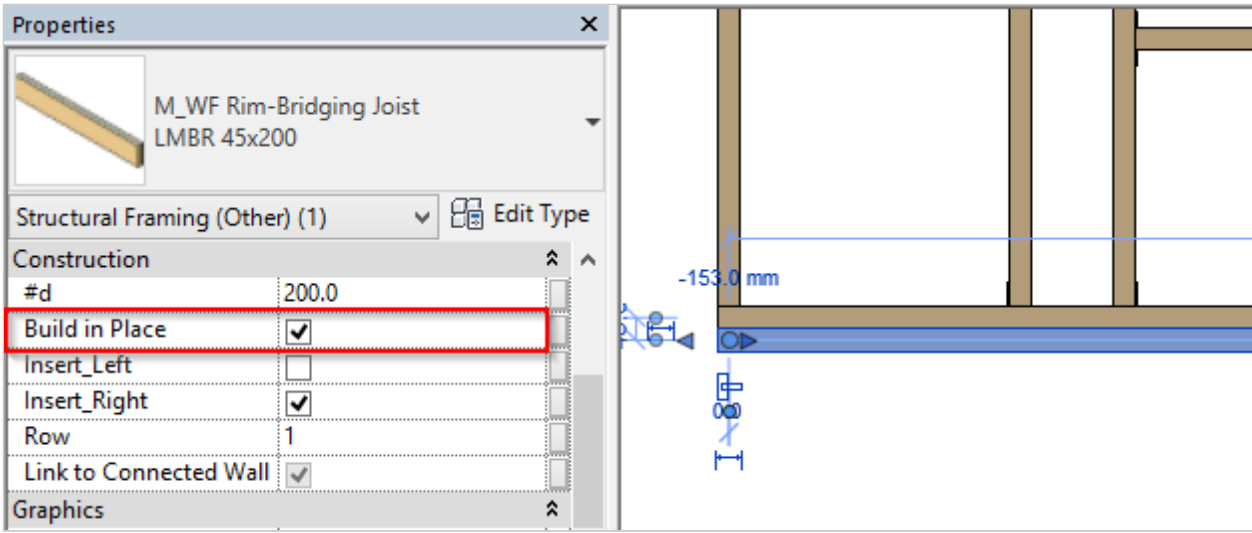


Build in Place – writes Yes/No information into beam instance parameter if the beam is built-in-place or is prefabricated with whole wall/floor/roof frame.

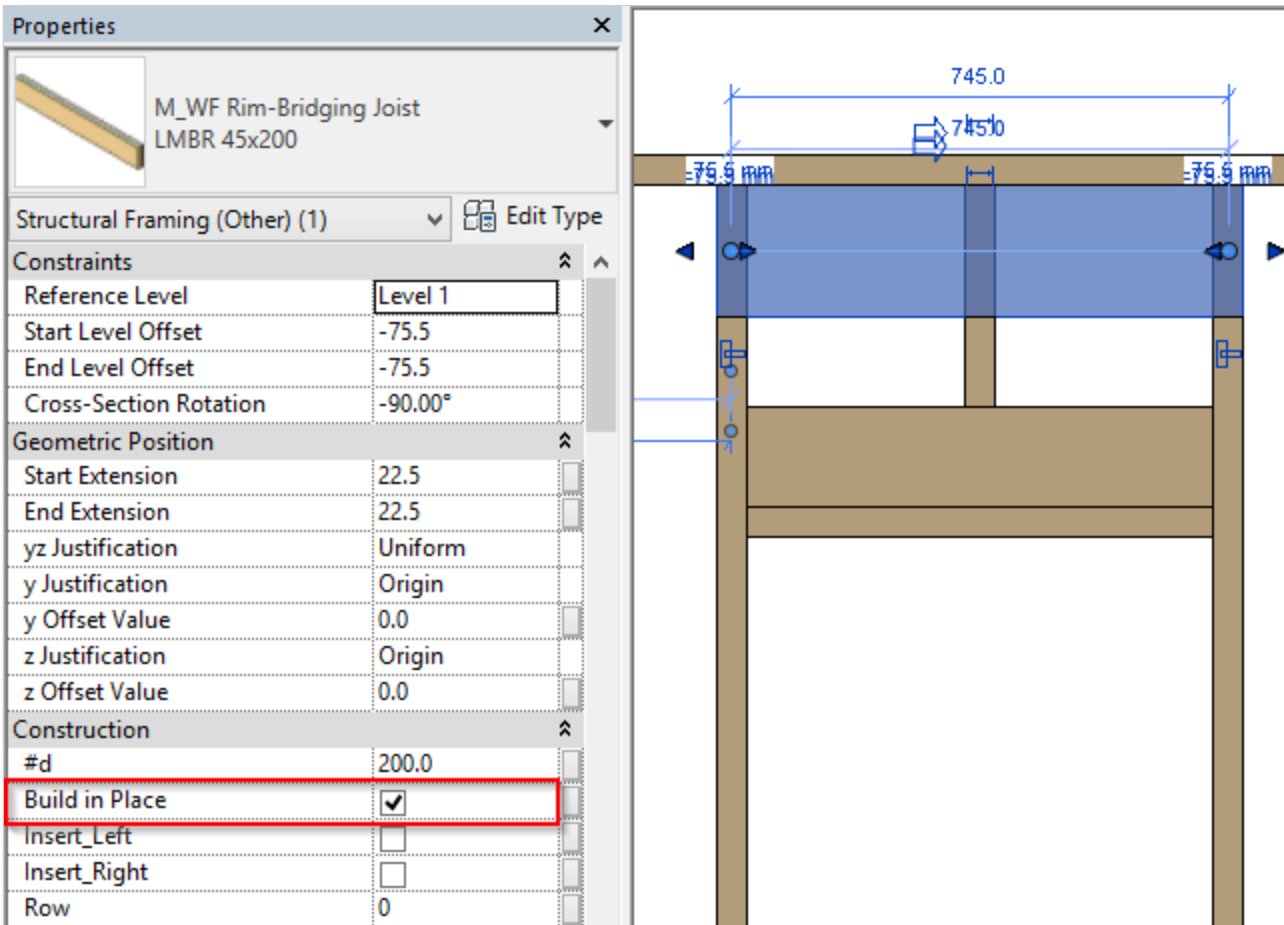
Example with wall corner studs:



Example with bottom rim joist:



Example with opening top header:



Properties

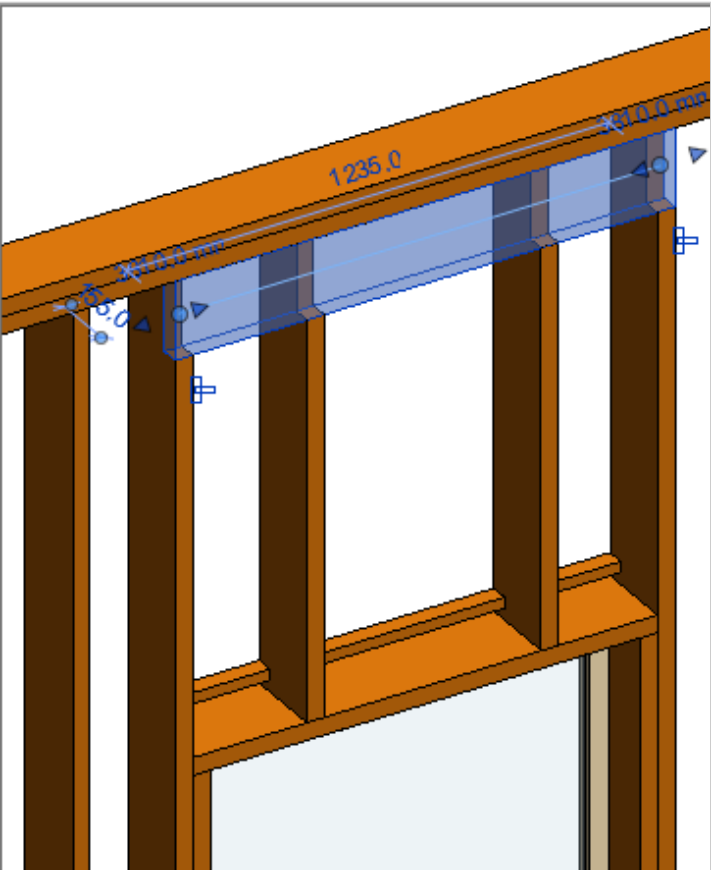
M_WF Plate
LMBR 45x200

Structural Framing (Other) (1) Edit Type

End Extension	22.5
yz Justification	Uniform
y Justification	Origin
y Offset Value	0.0
z Justification	Origin
z Offset Value	0.0

Construction

#d	200.0
Build in Place	<input checked="" type="checkbox"/>
Insert_Left	<input type="checkbox"/>
Insert_Right	<input type="checkbox"/>
Row	0
Link to Connected Wall	<input type="checkbox"/>
Assembly Mass	
Element Mass	
Assembly Created-Updated	
Details Created-Updated	
DC	



Example with roof end:

Properties

M_Roof_Frame Common Joist
LMBR 48x300

Structural Framing (Other) (1) Edit Type

Constraints

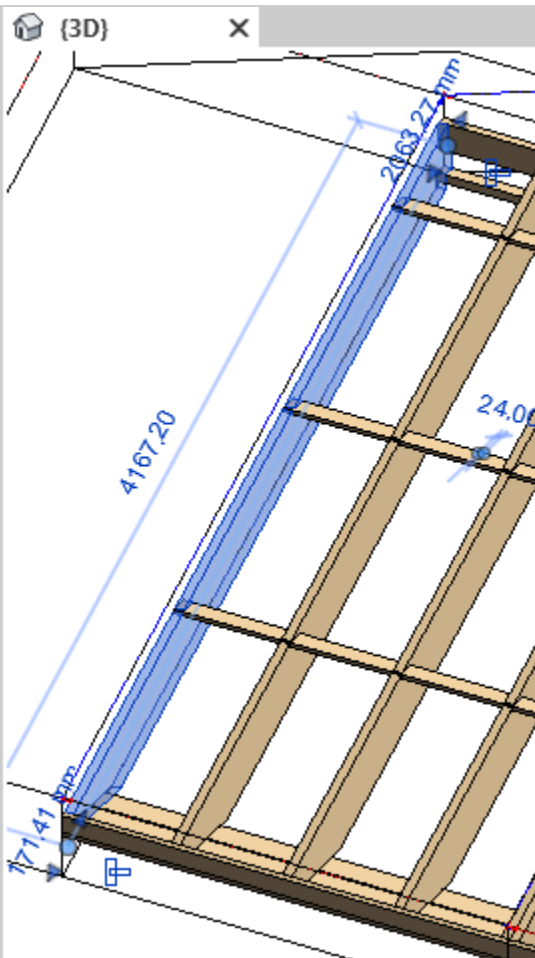
Reference Level	Roof
Start Level Offset	171.41
End Level Offset	2063.27
Cross-Section Rotation	0.00°

Geometric Position

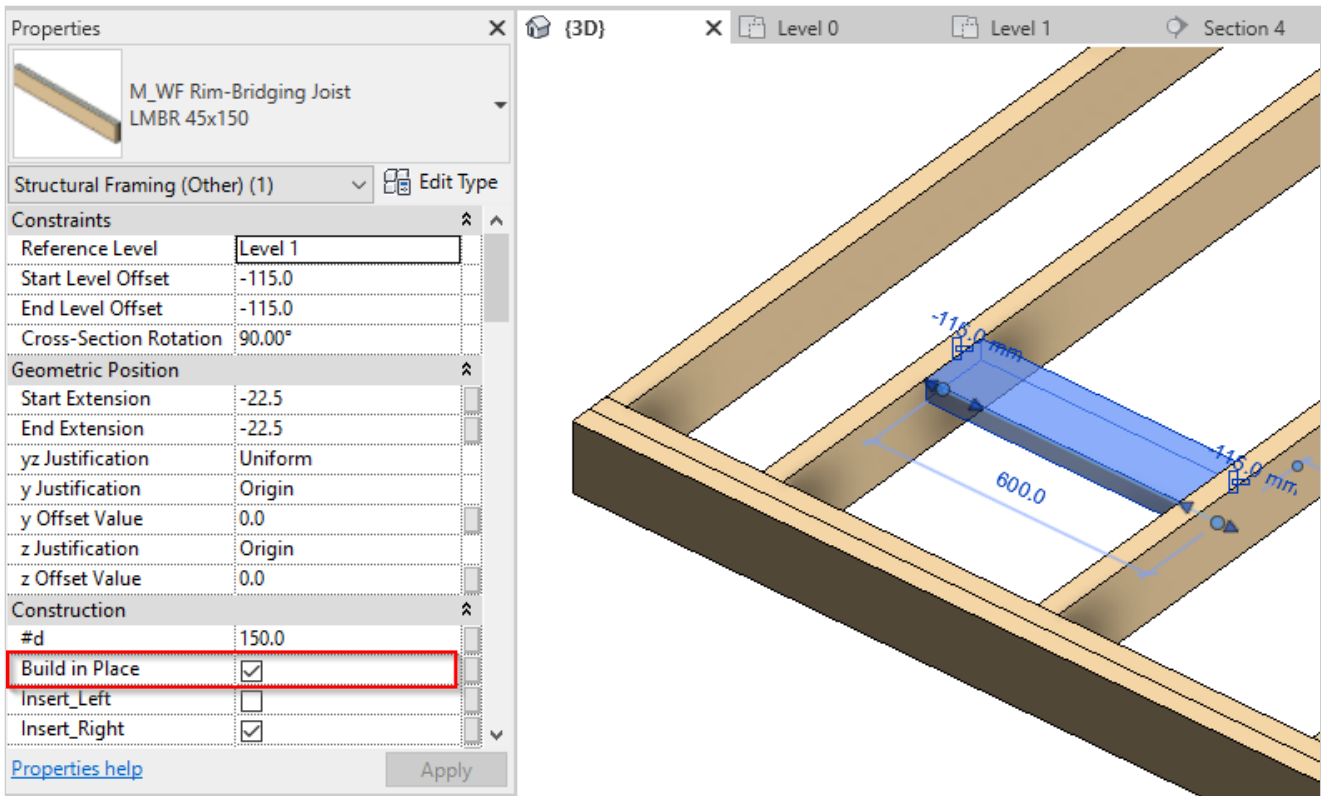
Start Extension	0.00
End Extension	0.00
yz Justification	Uniform
y Justification	Origin
y Offset Value	0.00
z Justification	Center
z Offset Value	0.00

Construction

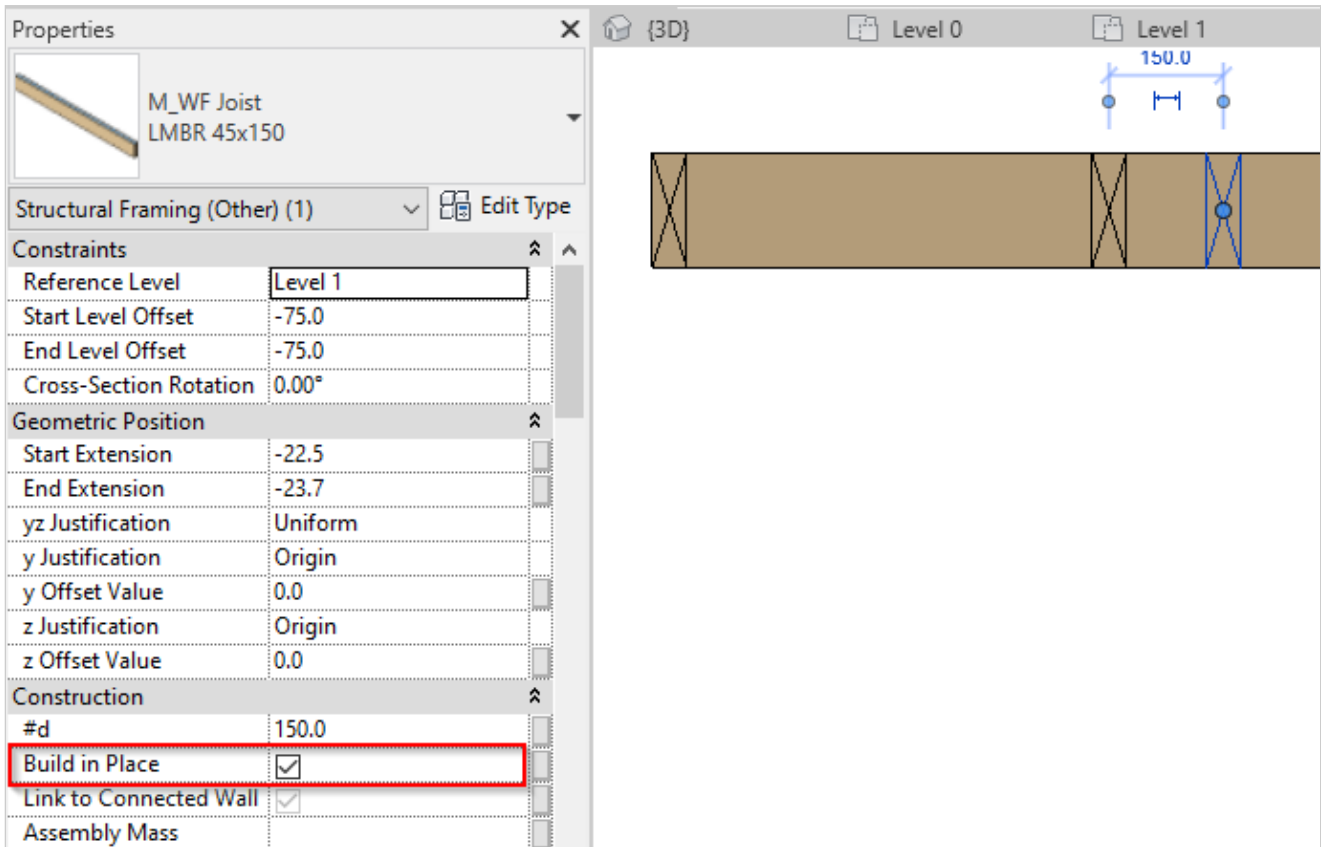
Build in Place	<input checked="" type="checkbox"/>
Lock Position	<input type="checkbox"/>
Lengthen_Start	0.00
Lengthen_End	0.00
Link to Connected Wall	<input checked="" type="checkbox"/>
Assembly Created-Updated	



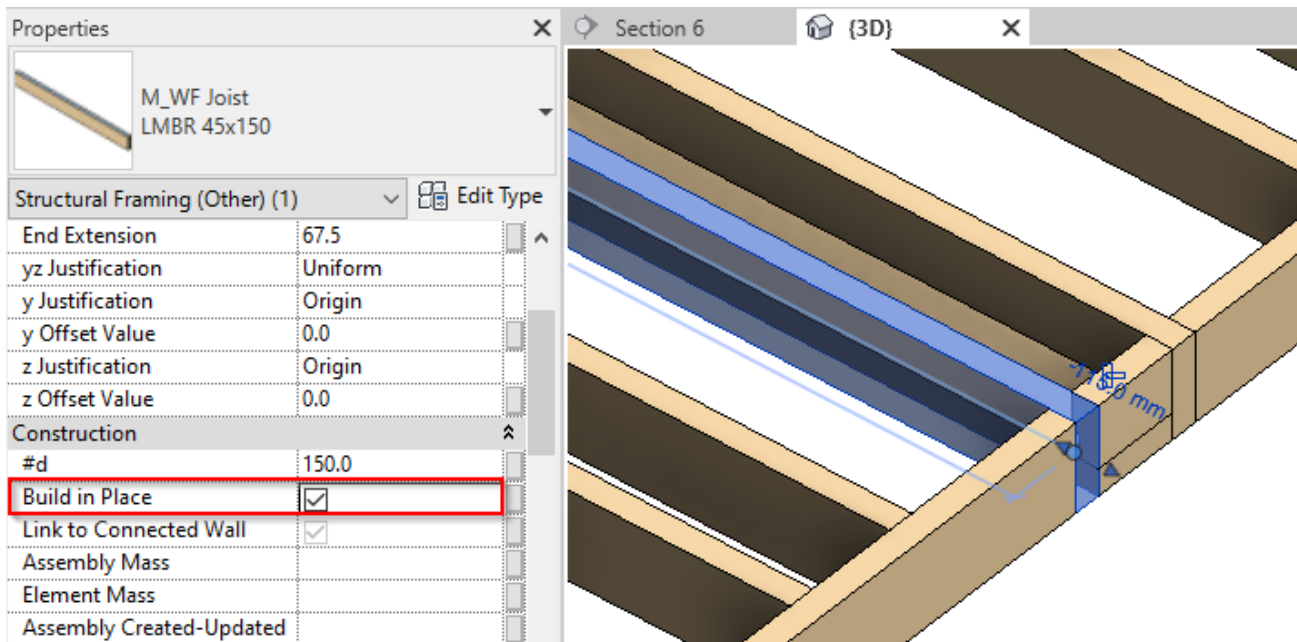
Example with floor bridging:



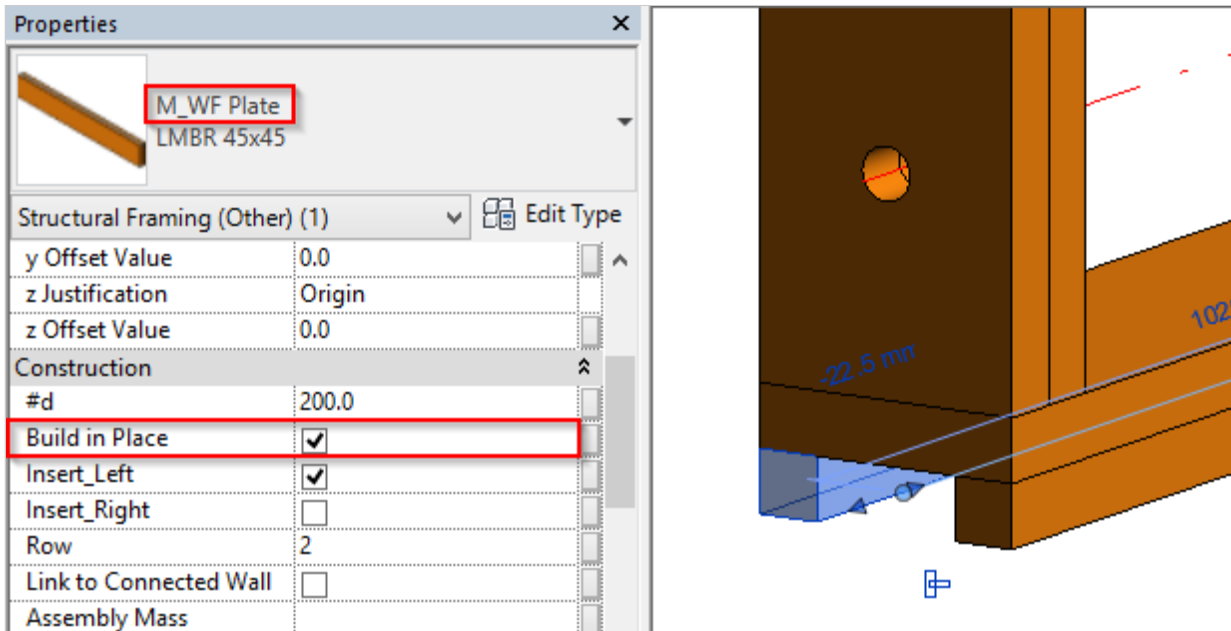
Example with floor additional joist:



Example with floor/roof vertical block:



Example with wall bottom pad:



Example with metal wall bottom pad:

The screenshot shows a cross-section of a wall with a blue rectangular plate attached to its bottom. A dimension line on the left indicates a height of 600. To the right, a 'Properties' panel is open for the selected plate. The panel includes a title bar, a thumbnail image, and a list of properties. The 'Build in Place' checkbox is highlighted with a red rectangle.

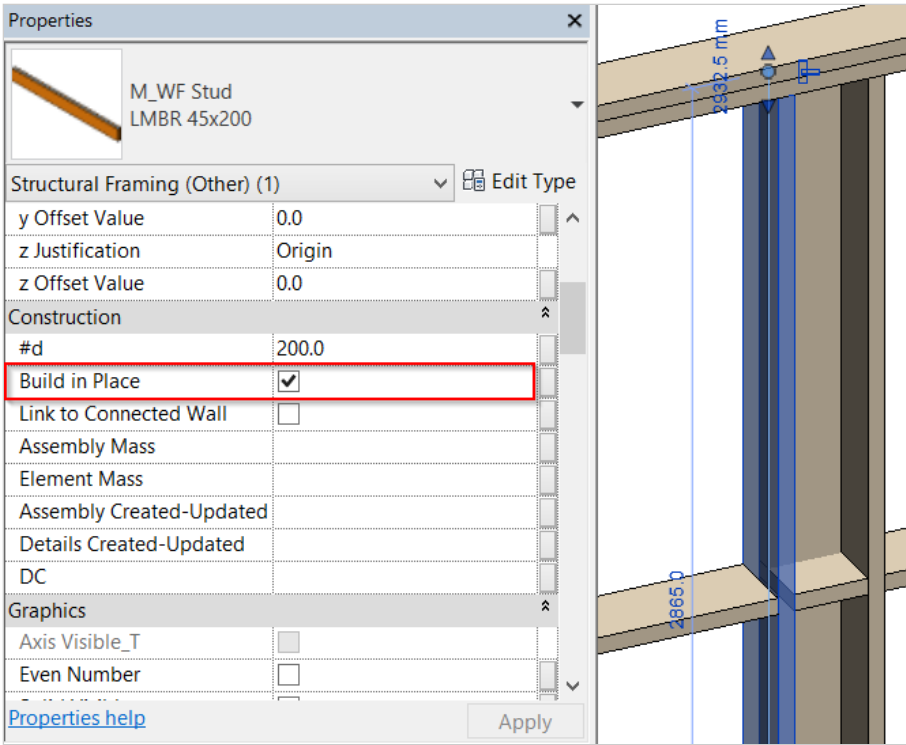
Identity Data	
FM HostSortMark	
FM Number of Connectors	0.000000
Image	
Comments	
Mark	
Framing Member	Bottom Plate
Framing Member Type	Plate
Framing Member Cut Length	5224.6
Framing	Wall
Framing Member Description	Bottom Plate
FM SortMark	
Framing Layer	Frame
Framing Member Mark	BP
FM HostMemberSortMark	W-6
Framing Member Mass	
Framing Member Volume	0.002 m ³
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>
CNC Part Number	

Example with wall additional stud:

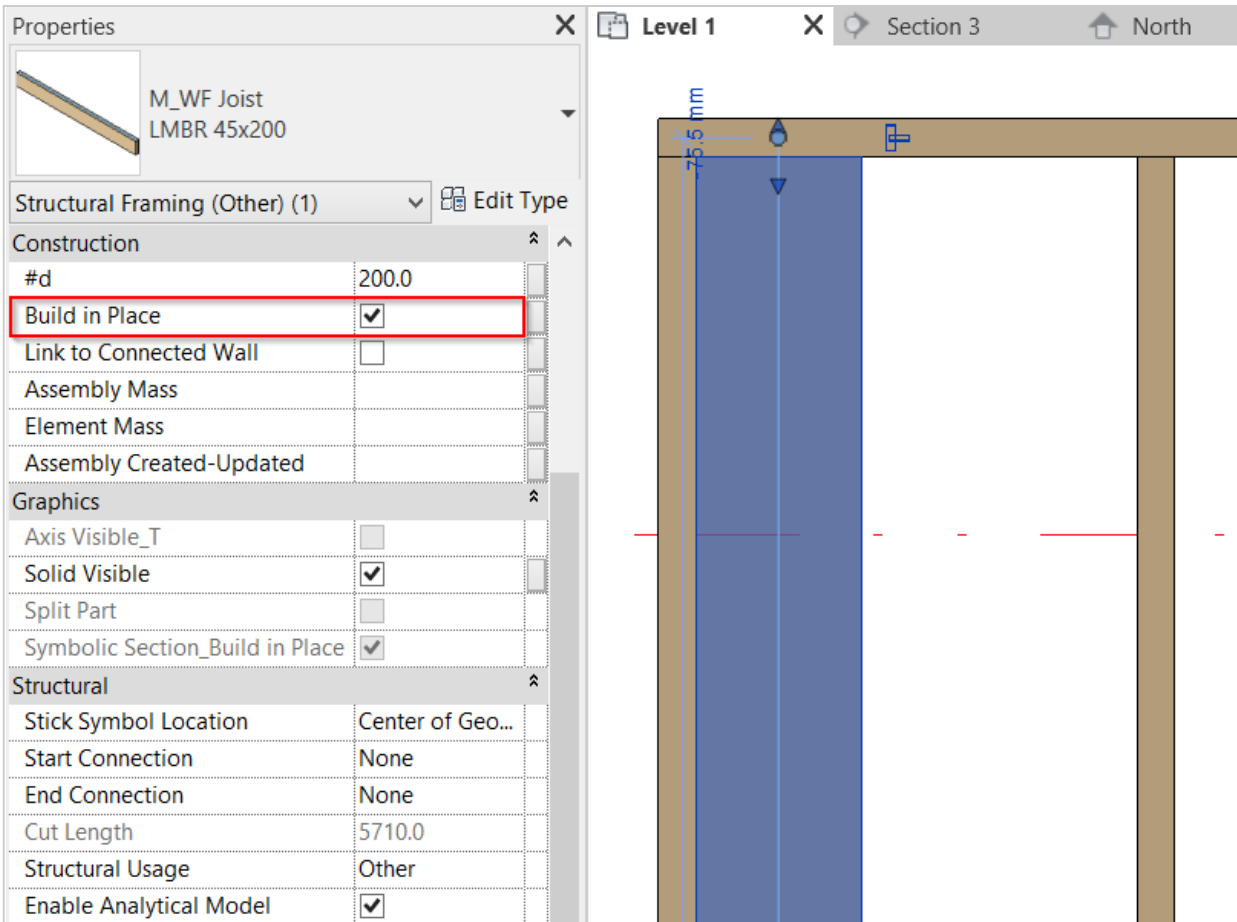
The screenshot shows a cross-section of a wall with an additional stud. A dimension line indicates a width of 377.5. To the left, a 'Properties' panel is open for the selected stud. The 'Build in Place' checkbox is highlighted with a red rectangle.

Construction	
#d	200.0
Build in Place	<input checked="" type="checkbox"/>
Link to Connected W...	<input type="checkbox"/>
Assembly Mass	
Element Mass	
Assembly Created-U...	
Details Created-Upd...	

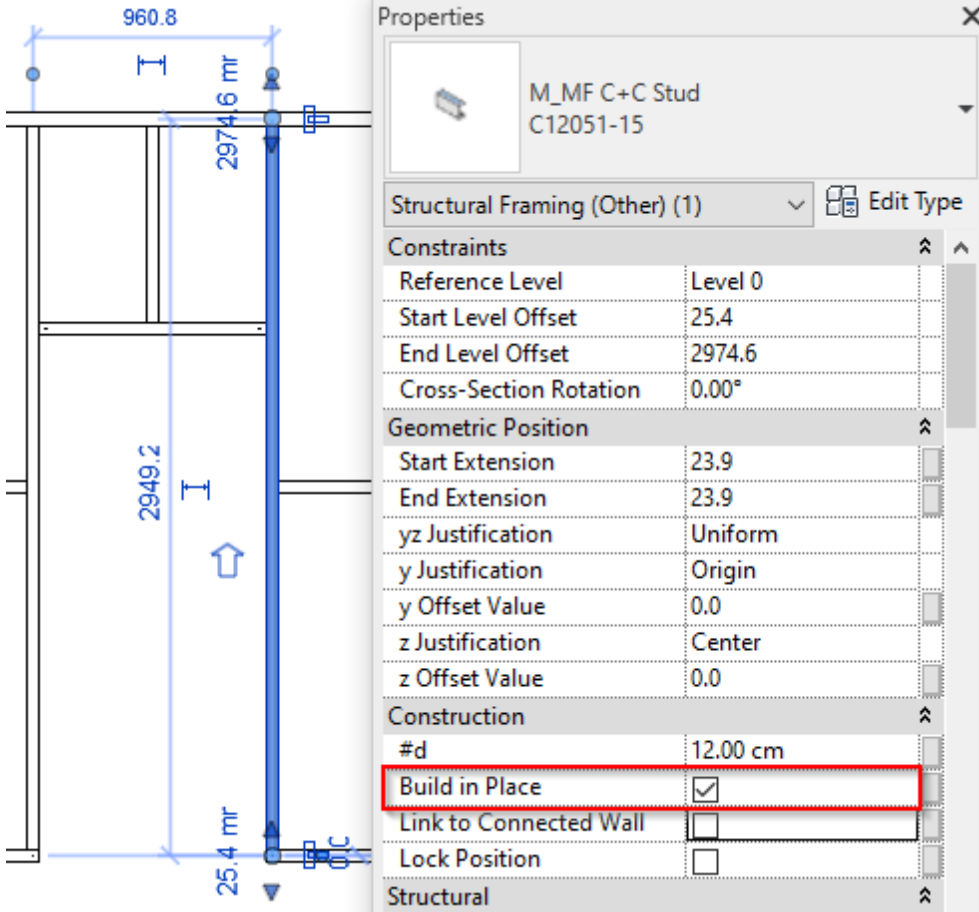
Example with wall vertical block:



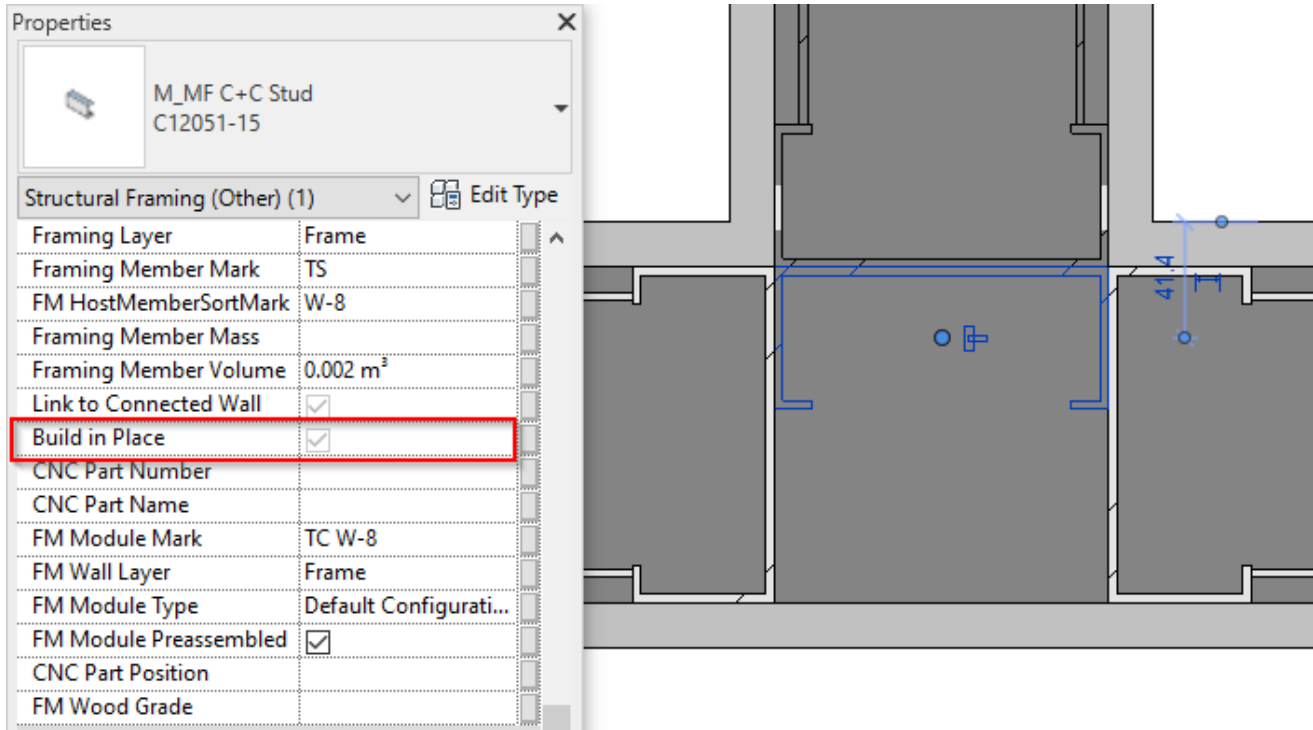
Example with floor end connection:



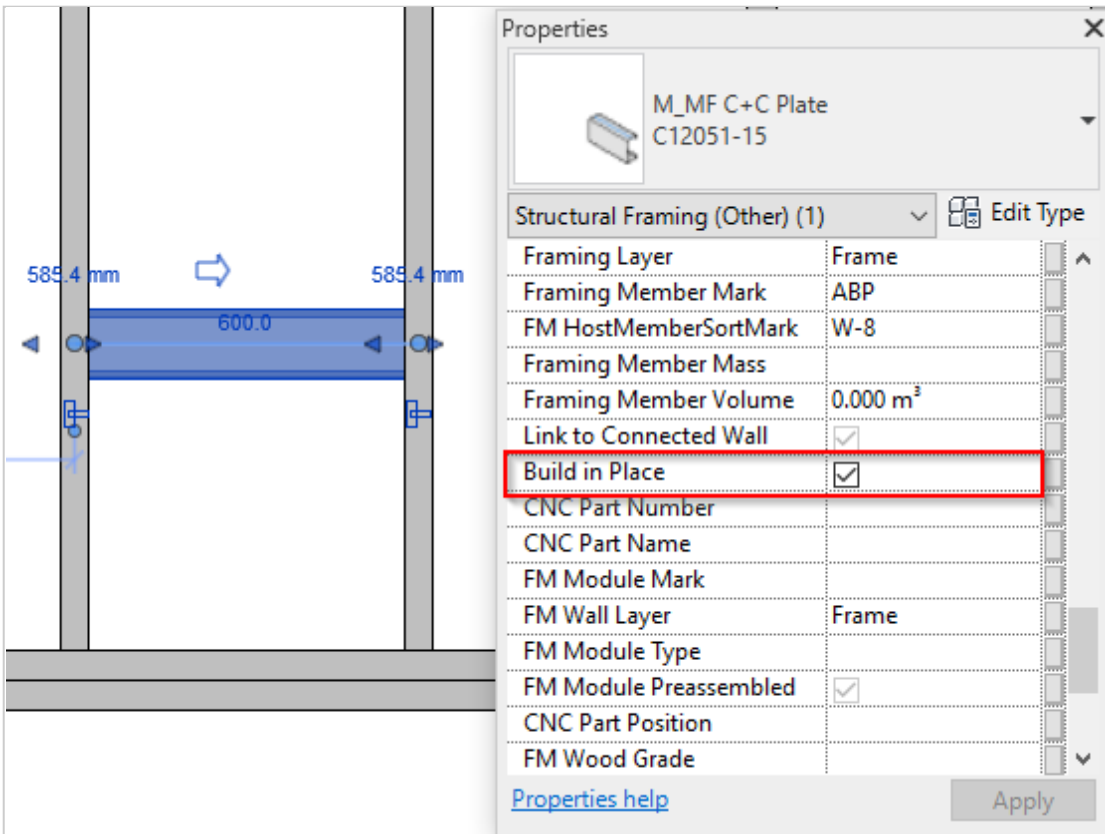
Example with metal opening king stud:



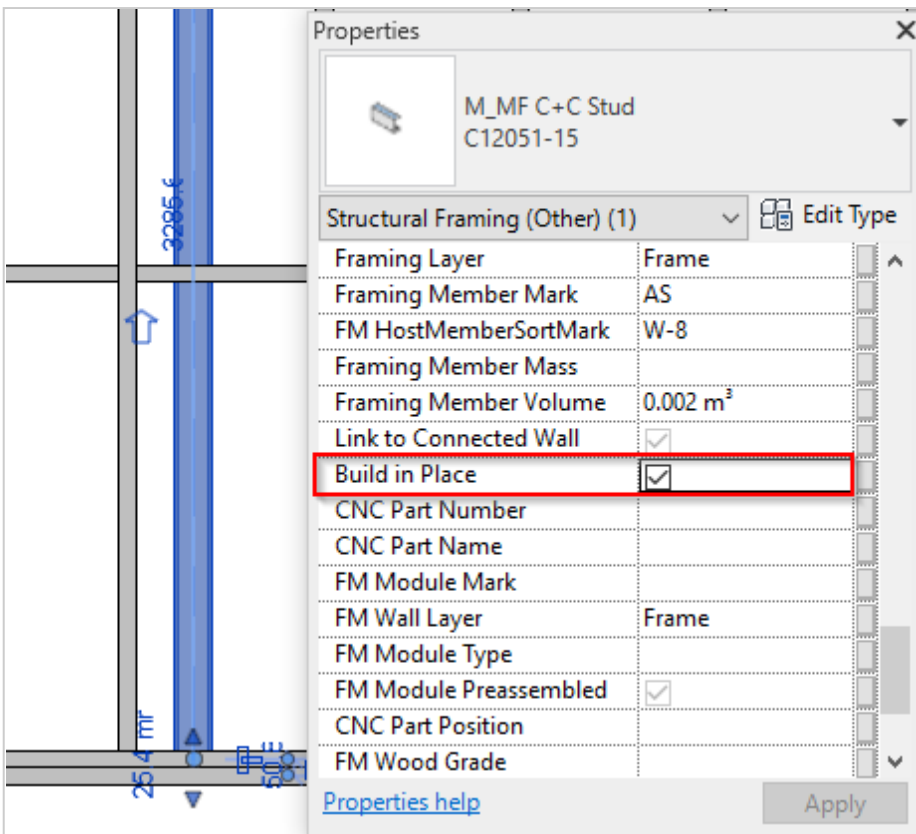
Example with T connection:



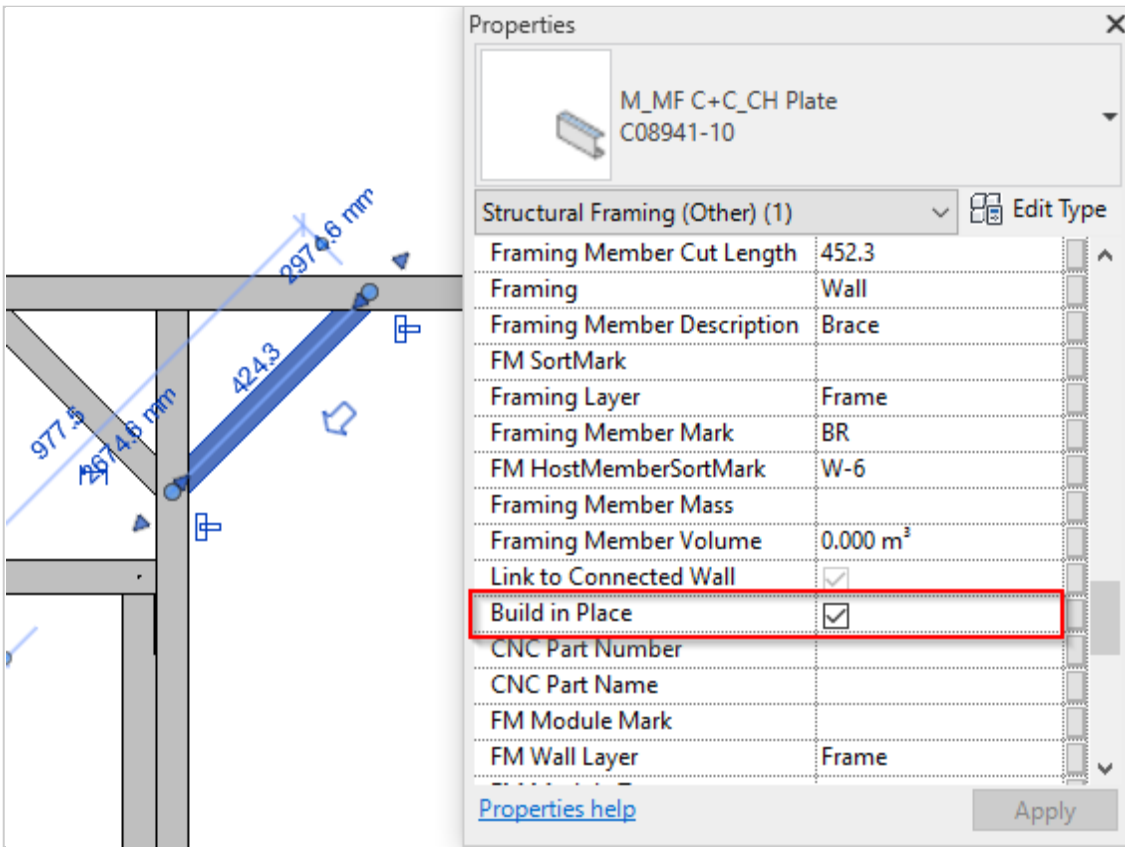
Example with metal bridging:



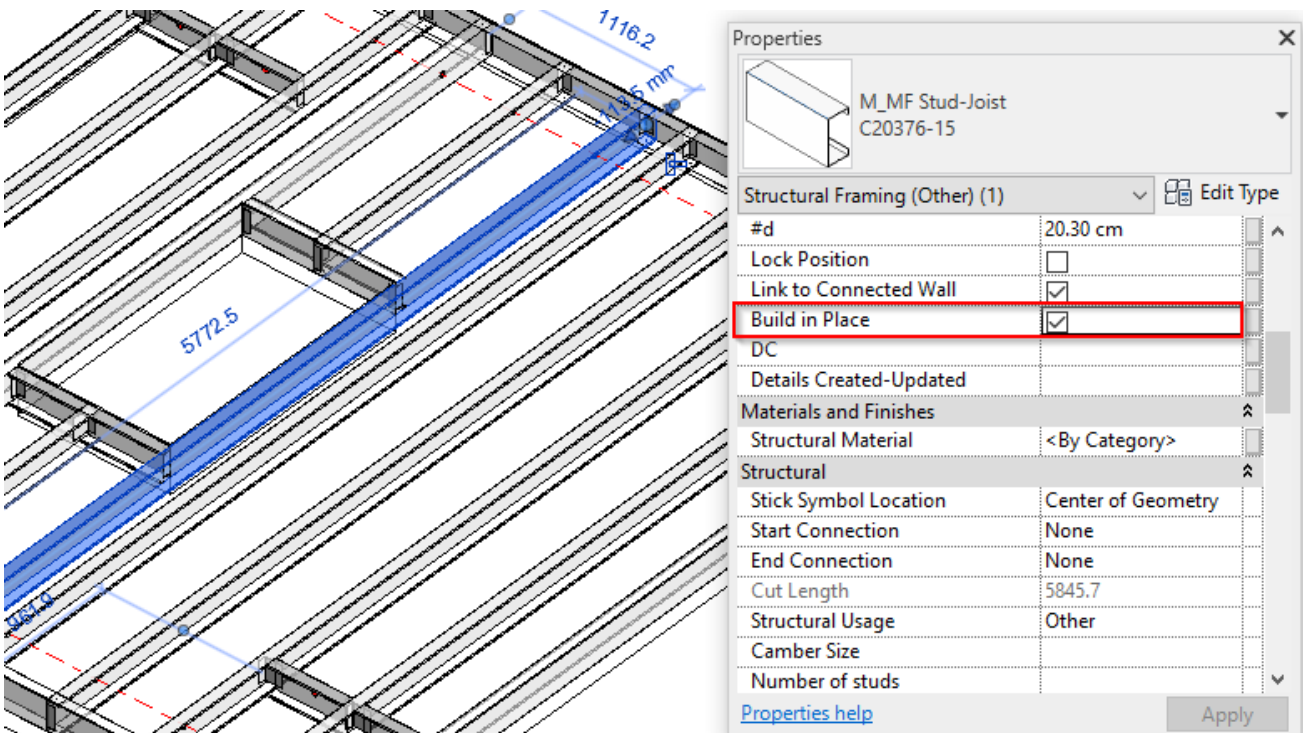
Example with metal additional stud:



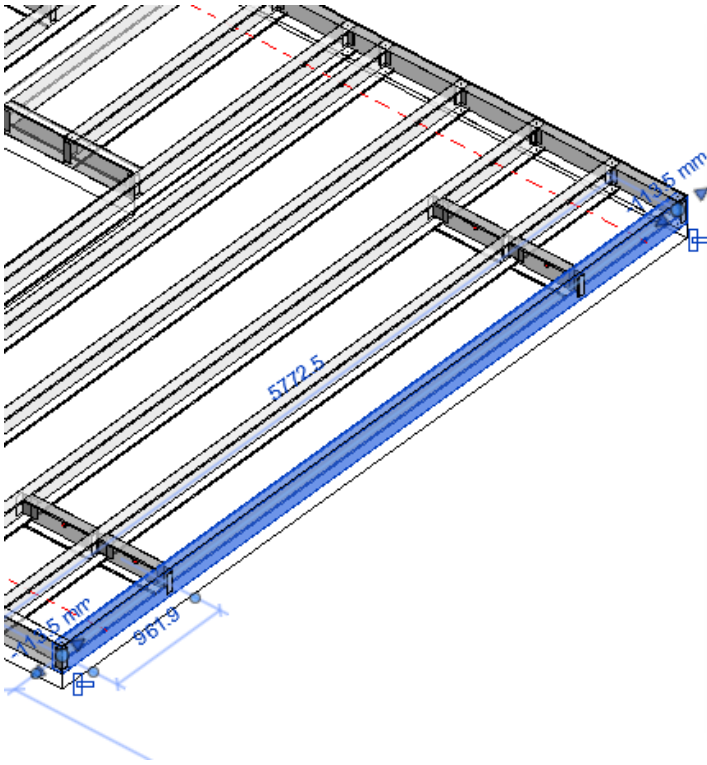
Example with metal frame corner brace:



Example with metal floor opening trimming joist blocking:



Example with metal floor end:



Properties

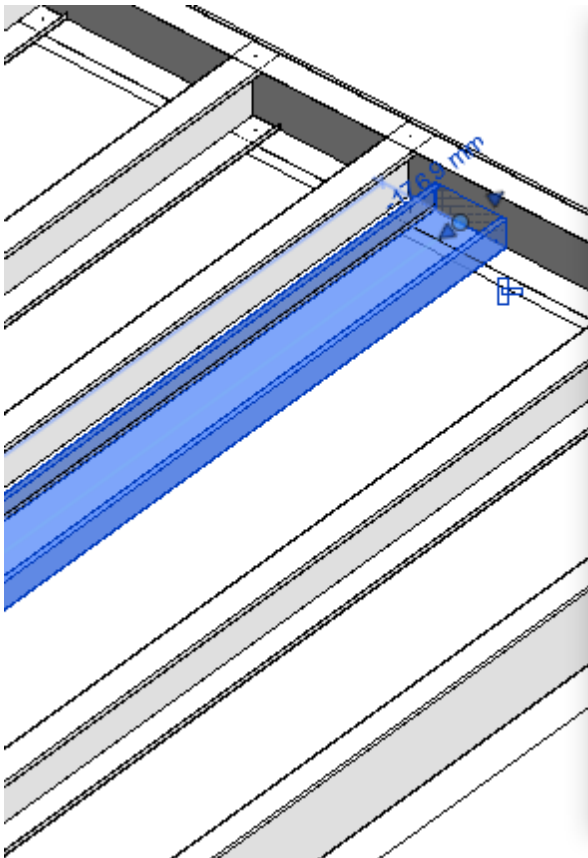
M_MF Stud-Joist
C20376-15

Structural Framing (Other) (1) Edit Type

y Offset Value	0.0
z Justification	Center
z Offset Value	0.0
Construction	
#d	20.30 cm
Lock Position	<input type="checkbox"/>
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>
DC	
Details Created-Updated	
Materials and Finishes	
Structural Material	<By Category>
Structural	
Stick Symbol Location	Center of Geometry
Start Connection	None
End Connection	None

[Properties help](#) Apply

Example with metal floor additional joist:



Properties

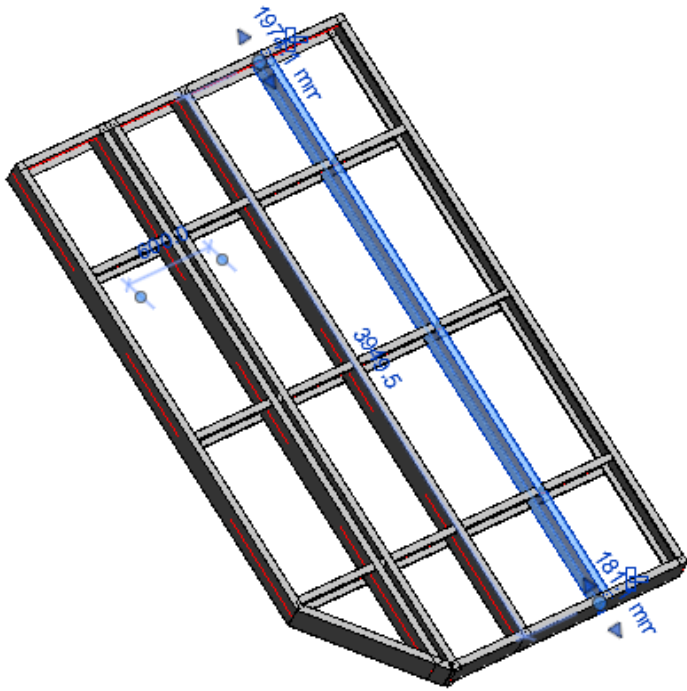
M_MF Stud-Joist
C20376-15

Structural Framing (Other) (1) Edit Type

Construction	
#d	0.00 cm
Lock Position	<input type="checkbox"/>
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>
DC	
Details Created-Updated	
Materials and Finishes	
Structural Material	<By Category>
Structural	
Stick Symbol Location	Center of Geometry
Start Connection	None
End Connection	None
Cut Length	5845.7

[Properties help](#) Apply

Example with metal roof:



Properties

M_MF Stud-Joist
C20351-15

Structural Framing (Other) (1) Edit Type

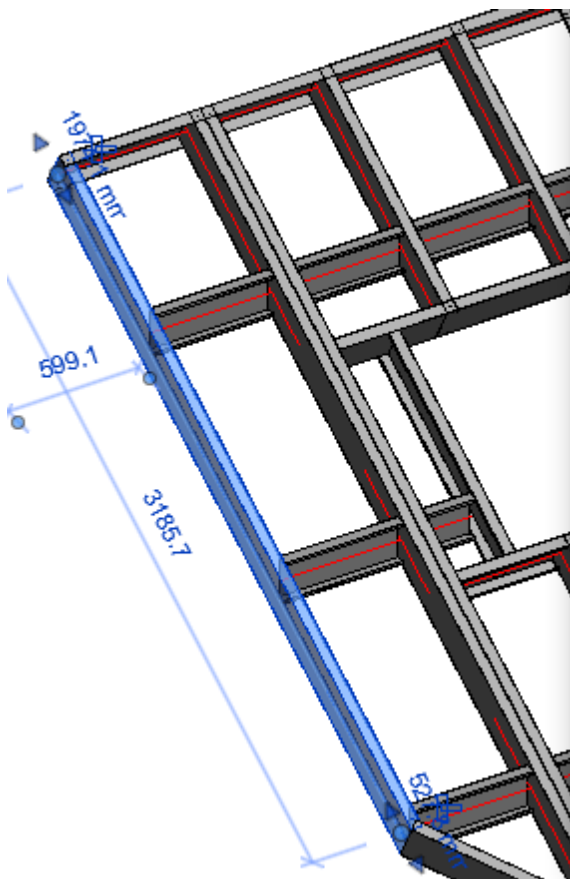
Construction	
#d	20.30 cm
Lock Position	<input type="checkbox"/>
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>

Graphics	
Solid Visible	<input checked="" type="checkbox"/>

Structural	
Stick Symbol Location	Center of Geometry
Start Connection	None
End Connection	None
Cut Length	4009.5
Structural Usage	Other
Camber Size	
Number of studs	
Enable Analytical Model	<input checked="" type="checkbox"/>

[Properties help](#) Apply

Example with metal roof ed:



Properties

M_MF Stud-Joist
C20351-15

Structural Framing (Other) (1) Edit Type

Structural Framing (Other) (1)	
End Extension	30.0
yz Justification	Uniform
y Justification	Origin
y Offset Value	0.0
z Justification	Center
z Offset Value	0.0

Construction	
#d	20.30 cm
Lock Position	<input type="checkbox"/>
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>

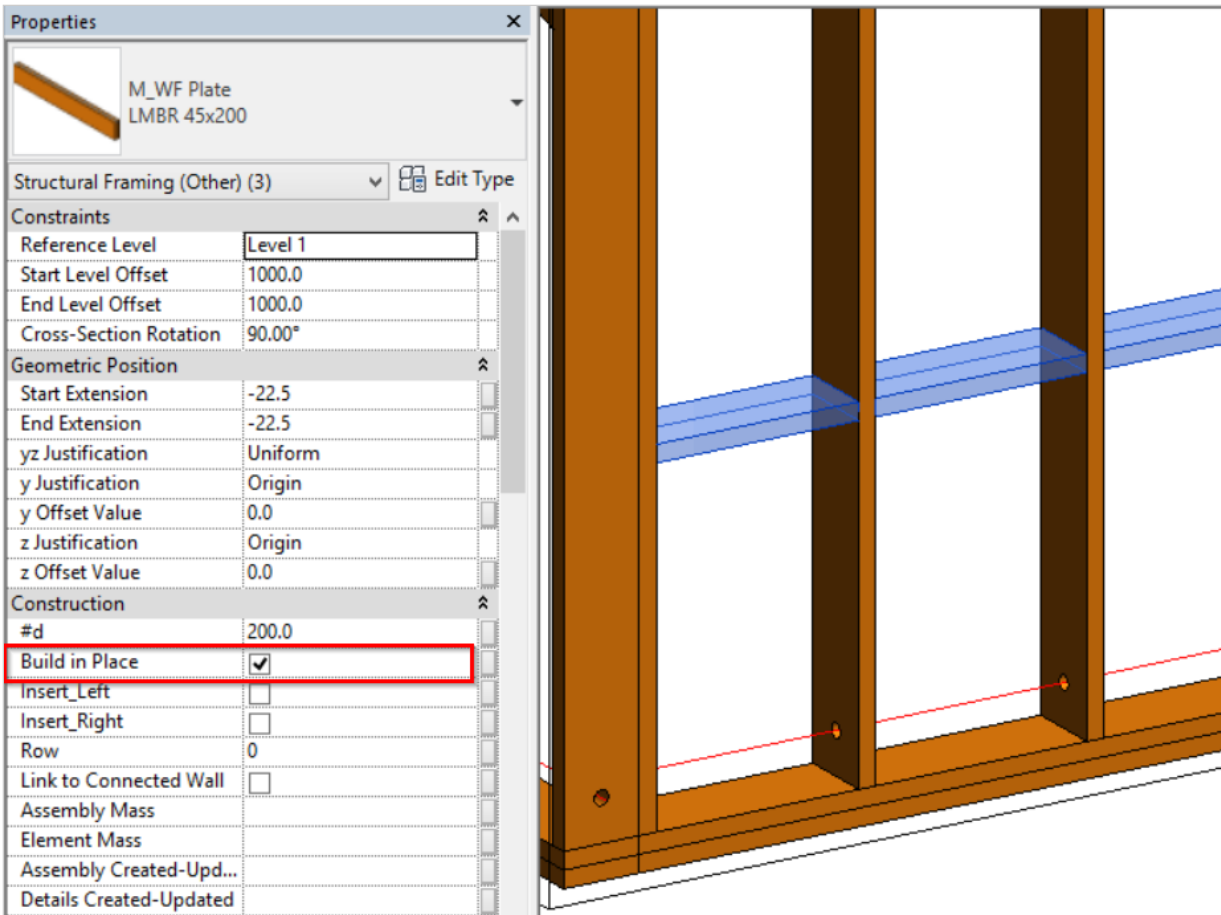
Graphics	
Solid Visible	<input checked="" type="checkbox"/>

Structural	
Stick Symbol Location	Center of Geometry
Start Connection	None

[Properties help](#) Apply

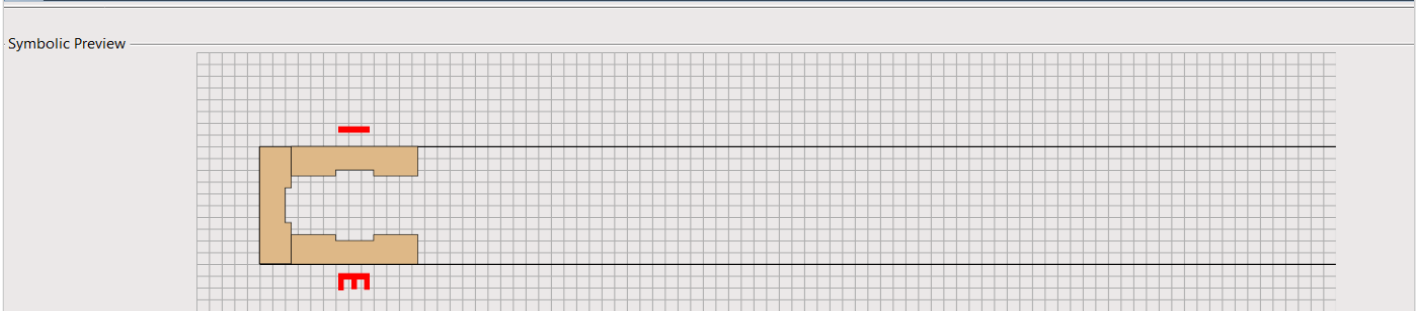
Example with wall additional blocking:

Link to



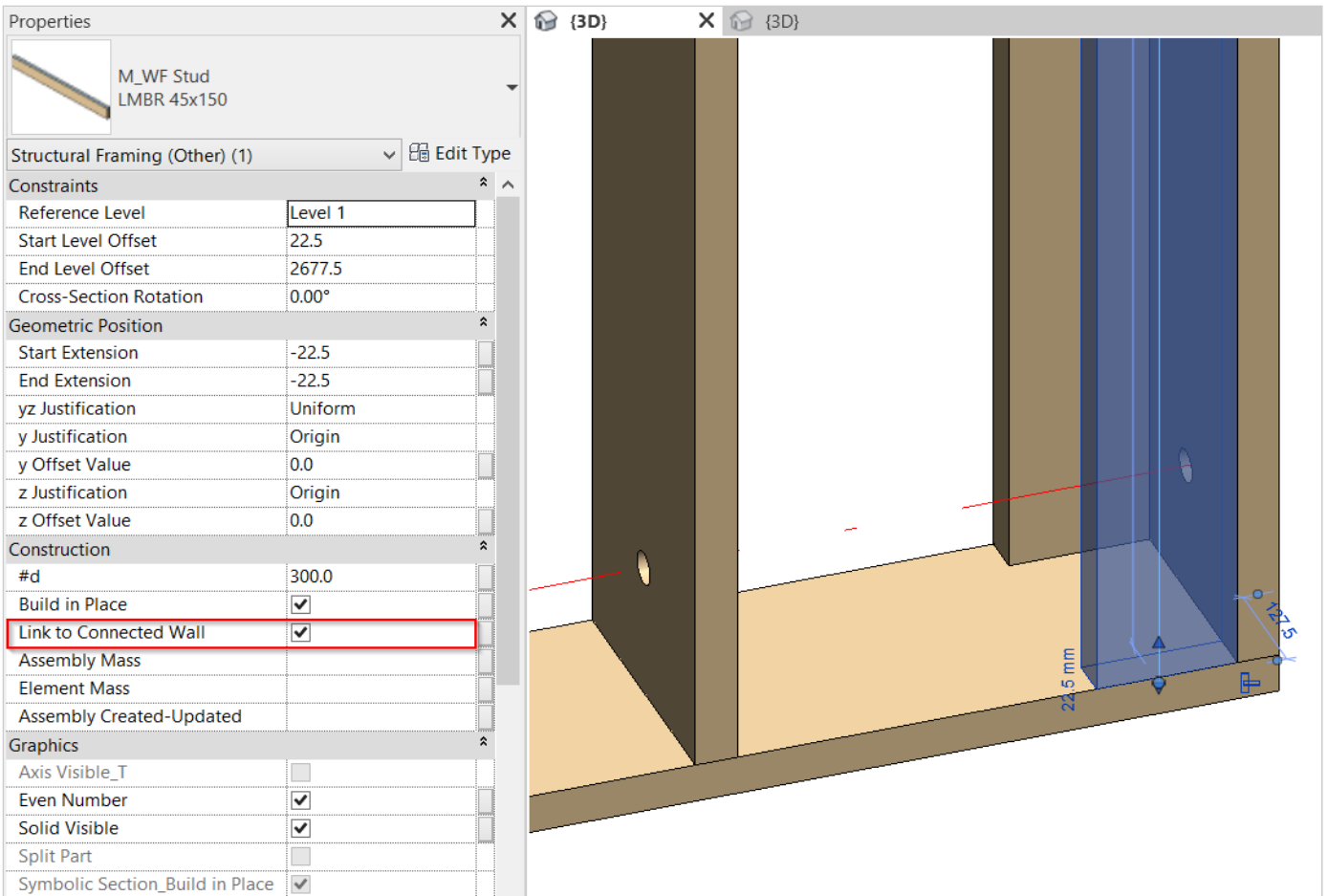
Connected Wall/Floor/Roof

	X-Position	Count	Type	Depth by Core	Rotat e 90	Rotat e 180	Spacing	Position	Align Type	Extend Start	Extend End	Cuts	Pre-assembled	Build in Place	Link to Connected Wall
1	Standard	1	M_WF Stud : LMBR 45x300	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 mm	Center	-- None	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Standard	1	M_WF Stud : LMBR 45x150	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0 mm	Internal	Previou	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Standard	1	M_WF Stud : LMBR 45x150	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0 mm	Externa	Previou	None	None	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

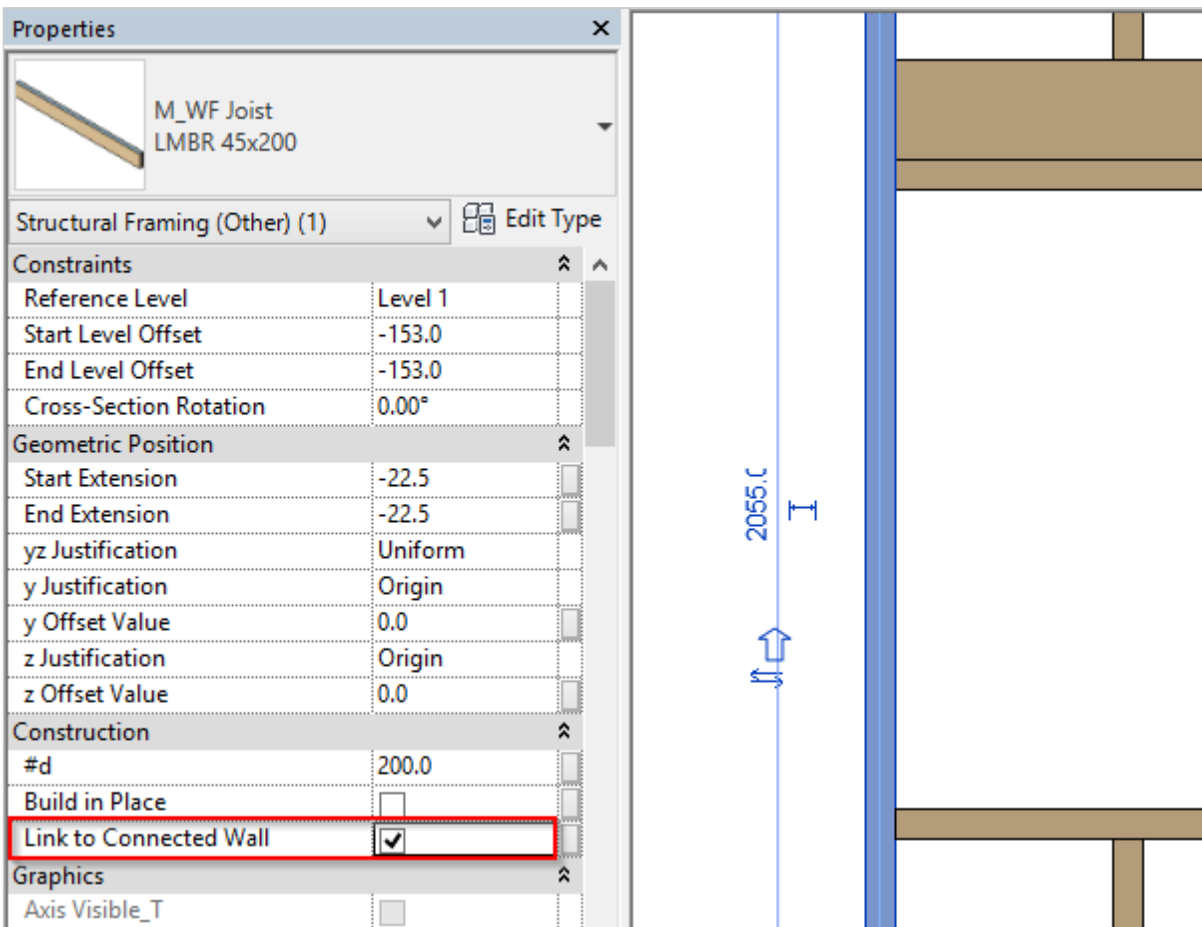


Link to Connected Wall/Floor/Roof – choose this option if end stud/joist is near wall/floor/roof corner and the element should be prefabricated and connected to an intersecting wall/floor/roof.

Example with wall corner:



Example with opening trimming joist:



Example with opening king stud:

The screenshot shows the 'Properties' panel for an 'M_WF Stud LMBR 45x200'. The 'Structural Framing (Other) (1)' section includes:

- yz Justification: Uniform
- y Justification: Origin
- y Offset Value: 0.0
- z Justification: Origin
- z Offset Value: 0.0

The 'Construction' section includes:

- #d: 200.0
- Build in Place:
- Link to Connected Wall: (highlighted with a red box)
- Assembly Mass: [empty]
- Element Mass: [empty]
- Assembly Created-Upd...: [empty]
- Details Created-Updat...: [empty]
- DC: [empty]

The 'Graphics' section includes:

- Stick Symbol Location: Center of Geometry
- Start Connection: None
- End Connection: None
- Cut Length: 3320.0
- Structural Usage: Other
- Enable Analytical Model:

The 'Dimensions' section includes:

- #d_True: 200.0
- HP: 200.0

The 3D model on the right shows a vertical wooden stud with dimensions: 343.0 (width), 3320.0 (height), and 200.0 (thickness).

Example with metal opening king stud:

The screenshot shows the 'Properties' panel for an 'M_MF C+C Stud C12051-15'. The 'Constraints' section includes:

- Reference Level: Level 0
- Start Level Offset: 25.4
- End Level Offset: 2974.6
- Cross-Section Rotation: 0.00°

The 'Geometric Position' section includes:

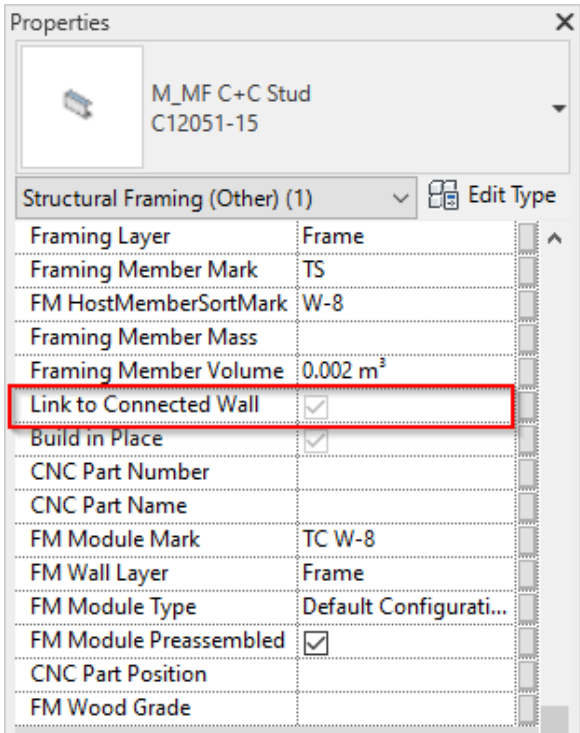
- Start Extension: 23.9
- End Extension: 23.9
- yz Justification: Uniform
- y Justification: Origin
- y Offset Value: 0.0
- z Justification: Center
- z Offset Value: 0.0

The 'Construction' section includes:

- #d: 12.00 cm
- Build in Place:
- Link to Connected Wall: (highlighted with a red box)
- Lock Position:

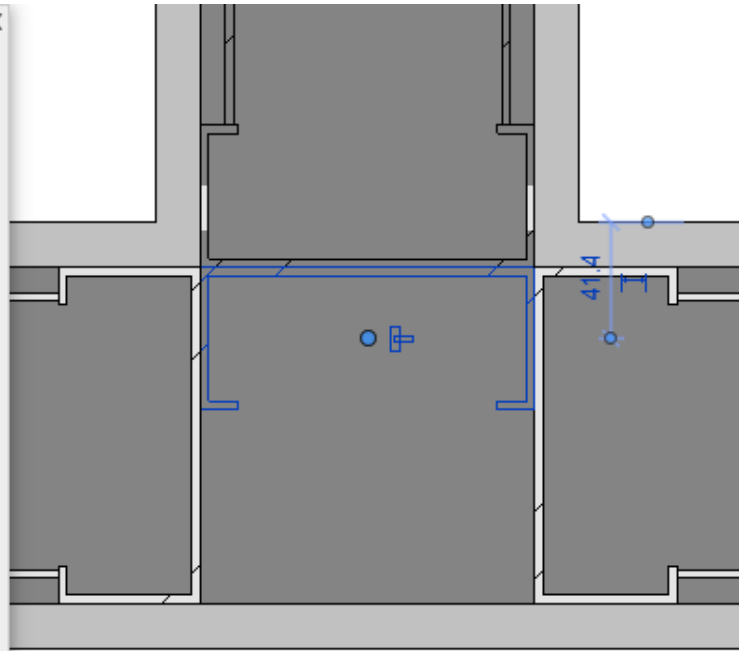
The 2D technical drawing on the left shows a vertical metal stud with dimensions: 960.8 (width), 2974.6 (height), 2949.2 (height), and 5.4 (width).

Example with metal T connection:

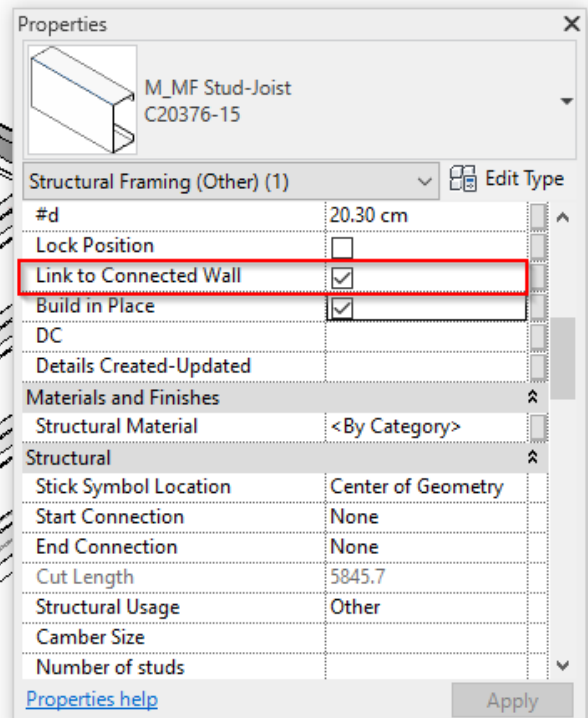
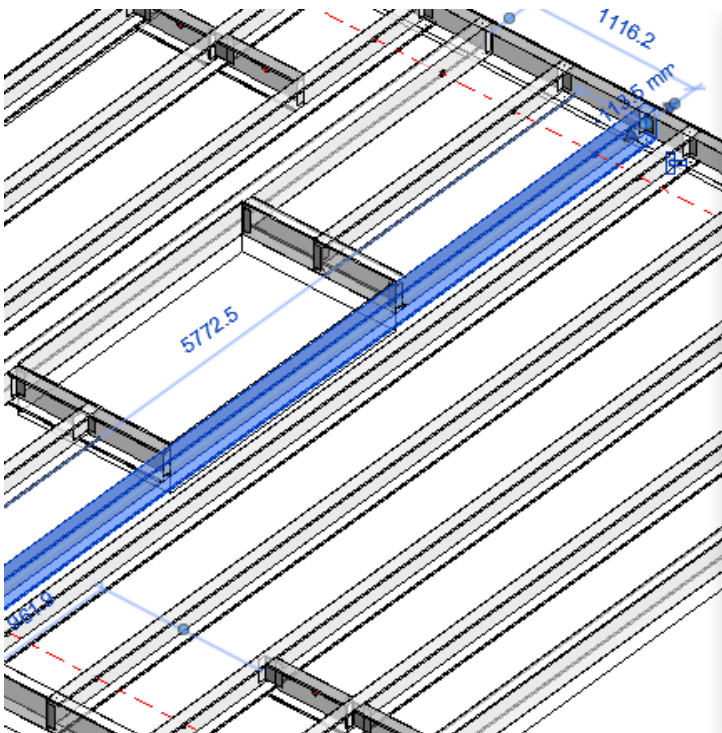


Properties window for M_MF C+C Stud C12051-15. The window shows various properties for the selected object, including framing layer, member mark, mass, volume, and connection options. The 'Link to Connected Wall' checkbox is highlighted with a red box.

Property	Value
Structural Framing (Other) (1)	▼ Edit Type
Framing Layer	Frame
Framing Member Mark	TS
FM HostMemberSortMark	W-8
Framing Member Mass	
Framing Member Volume	0.002 m ³
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>
CNC Part Number	
CNC Part Name	
FM Module Mark	TC W-8
FM Wall Layer	Frame
FM Module Type	Default Configurati...
FM Module Preassembled	<input checked="" type="checkbox"/>
CNC Part Position	
FM Wood Grade	



Example with metal floor opening trimming joist:



Properties window for M_MF Stud-Joist C20376-15. The window shows various properties for the selected object, including diameter, lock position, connection options, and structural details. The 'Link to Connected Wall' checkbox is highlighted with a red box.

Property	Value
Structural Framing (Other) (1)	▼ Edit Type
#d	20.30 cm
Lock Position	<input type="checkbox"/>
Link to Connected Wall	<input checked="" type="checkbox"/>
Build in Place	<input checked="" type="checkbox"/>
DC	
Details Created-Updated	
Materials and Finishes	
Structural Material	<By Category>
Structural	
Stick Symbol Location	Center of Geometry
Start Connection	None
End Connection	None
Cut Length	5845.7
Structural Usage	Other
Camber Size	
Number of studs	