

ADD/MODIFY BRACING – Modify Brace Group


Modified on: Sat, 9 Jan, 2021 at 12:13 PM

Add Diagonal Bracing

Brace Group

Diagonal Bracing

Add Diagonal Bracing

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

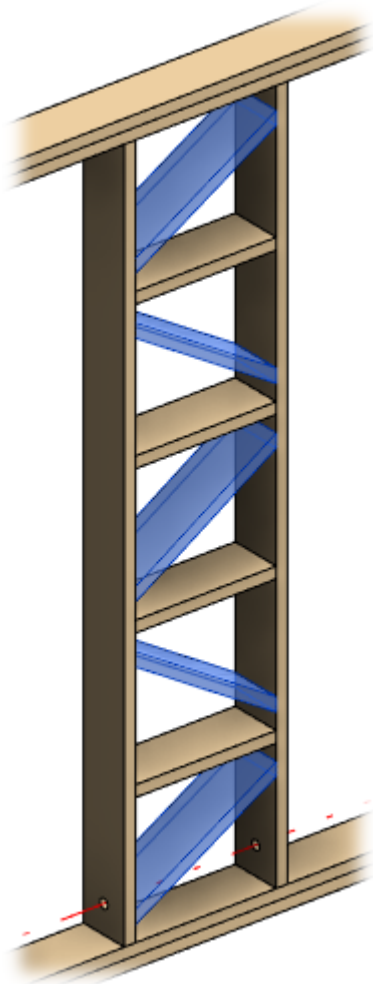
Rotate 90°

Extend Ends (new Families)

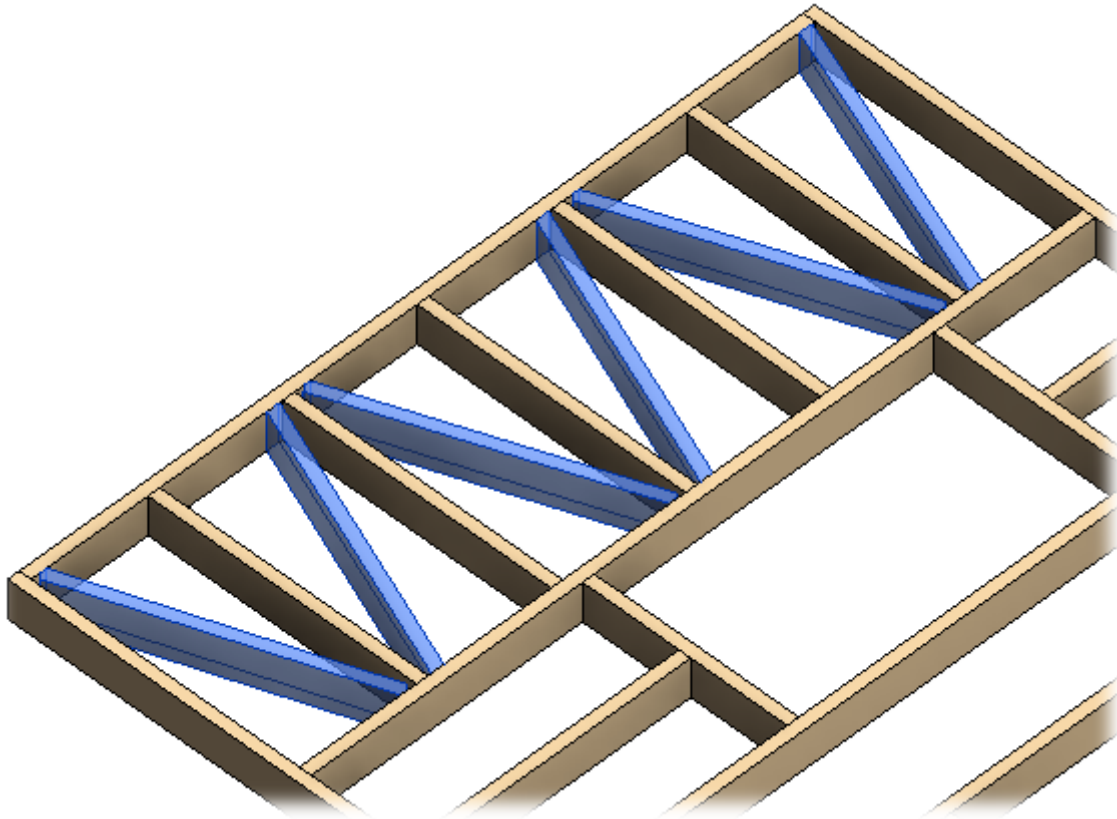
Add Diagonal Last

Add Diagonal Bracing – enables options for adding diagonal braces in the brace group.

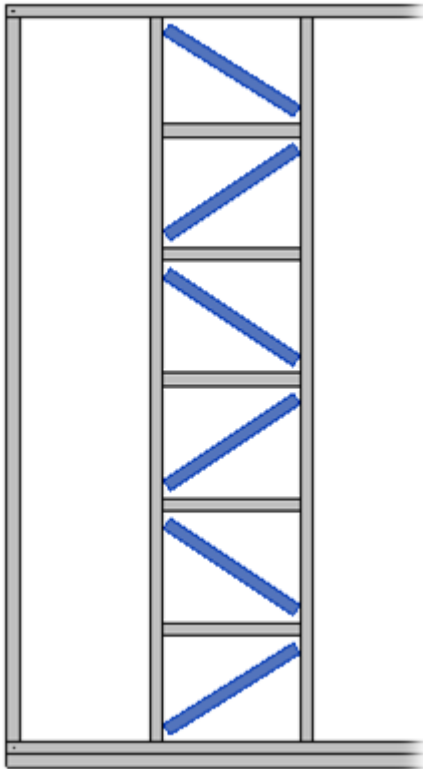
Diagonal braces can be disabled:



Example with wood floor:



Example with metal frame - diagonal braces can be disabled:




Diagonal Brace sizes

Brace Group

Diagonal Bracing

Add Diagonal Bracing

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

Add Diagonal Last

Type – select the family and type which will be used for diagonal brace. Default family is **M_WF Plate.rvt** (for Metric projects) and **I_WF Plate.rvt** (for Imperial projects).

Width (b) – shows b size of selected type.

Depth (h,d) – shows h or d size of selected type.


Define Depth (h,d) by Layer Thickness – **Wall+** will automatically create new type for selected family with new depth equal to selected wall layer thickness.

Rotate 90°

Brace Group

Diagonal Bracing

Add Diagonal Bracing

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

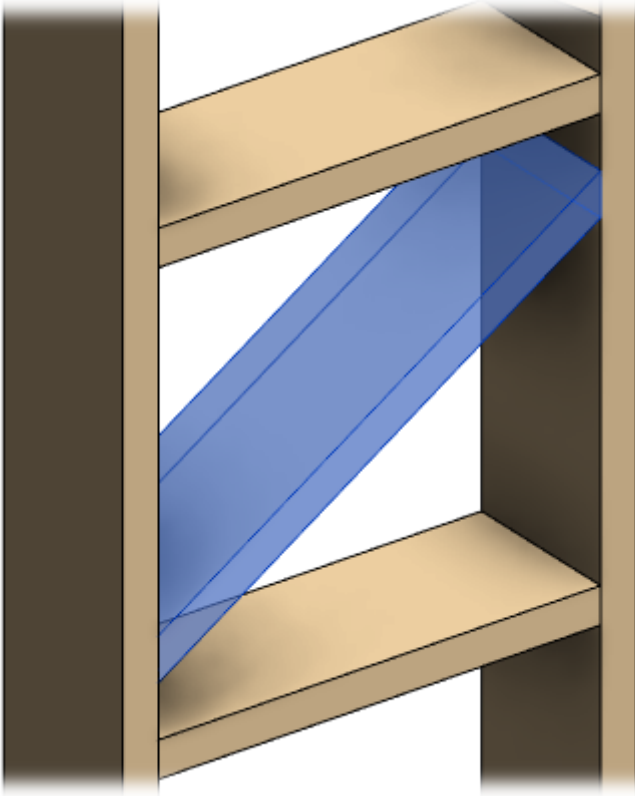
Rotate 90°

Extend Ends (new Families)

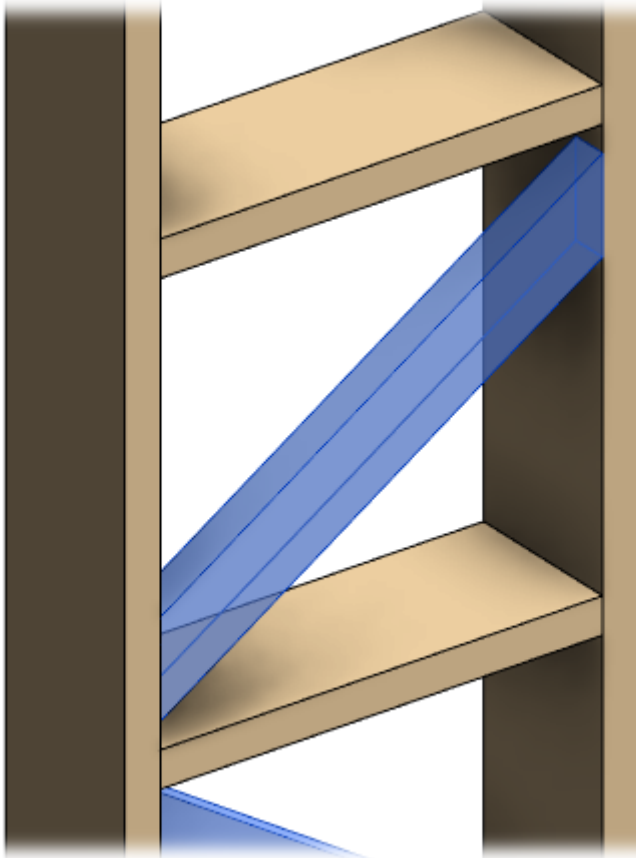
Add Diagonal Last

Rotate 90° – diagonal brace can be rotated 90 degrees to its initial position.

*Example: when **Rotate 90°** is switched ON:*



*Example: when **Rotate 90°** is switched OFF:*



Extend Ends

Brace Group

Diagonal Bracing

Add Diagonal Bracing

Type

Width (b)

Depth (h,d)

Define Depth (h,d) by Layer Thickness

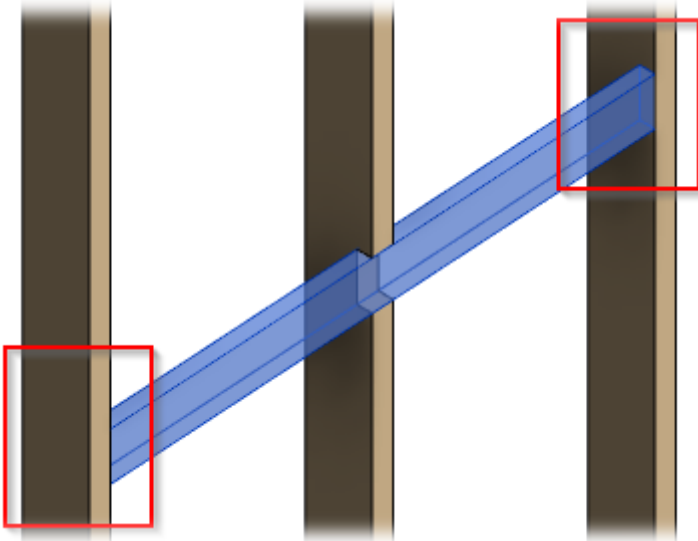
Rotate 90°

Extend Ends (new Families)

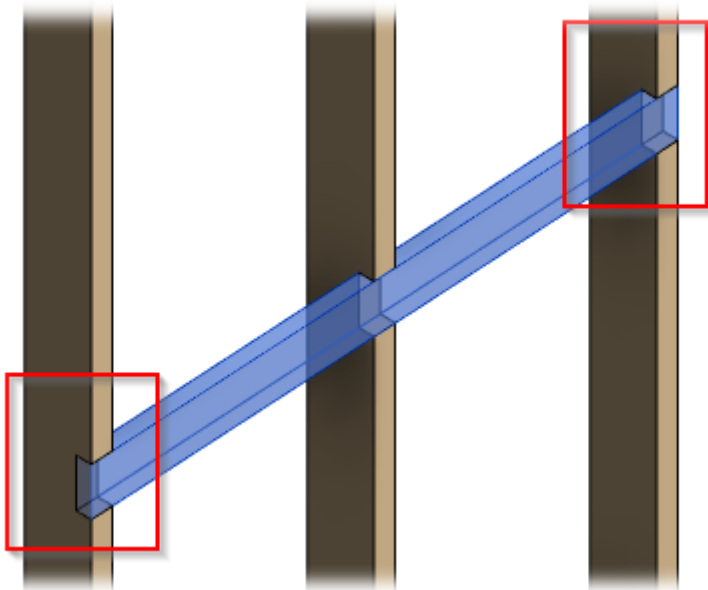
Add Diagonal Last

Extend Ends - extends diagonal brace ends when it connects to other elements.

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



*Example: when **Extend Ends** is switched ON:*




Add Diagonal Last

Brace Group

Diagonal Bracing

Add Diagonal Bracing

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

Add Diagonal Last


Add Diagonal Last – tries to finish a group with diagonal braces.

Add Bridging/Nogging

Brace Group

Bridging/Nogging

Add Bridging/Nogging

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

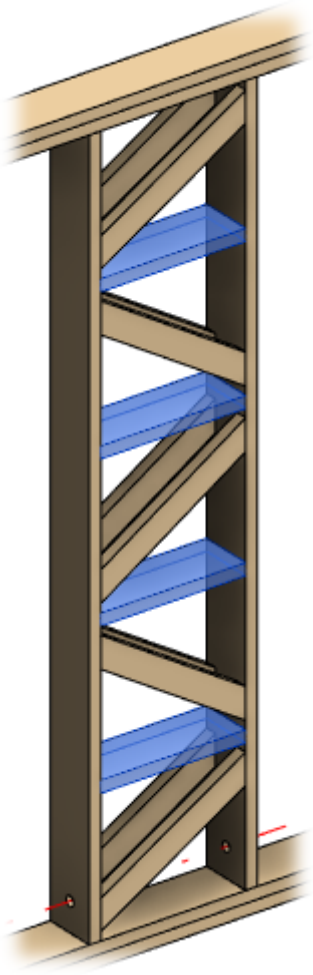
Add every Second

Start from Even Number

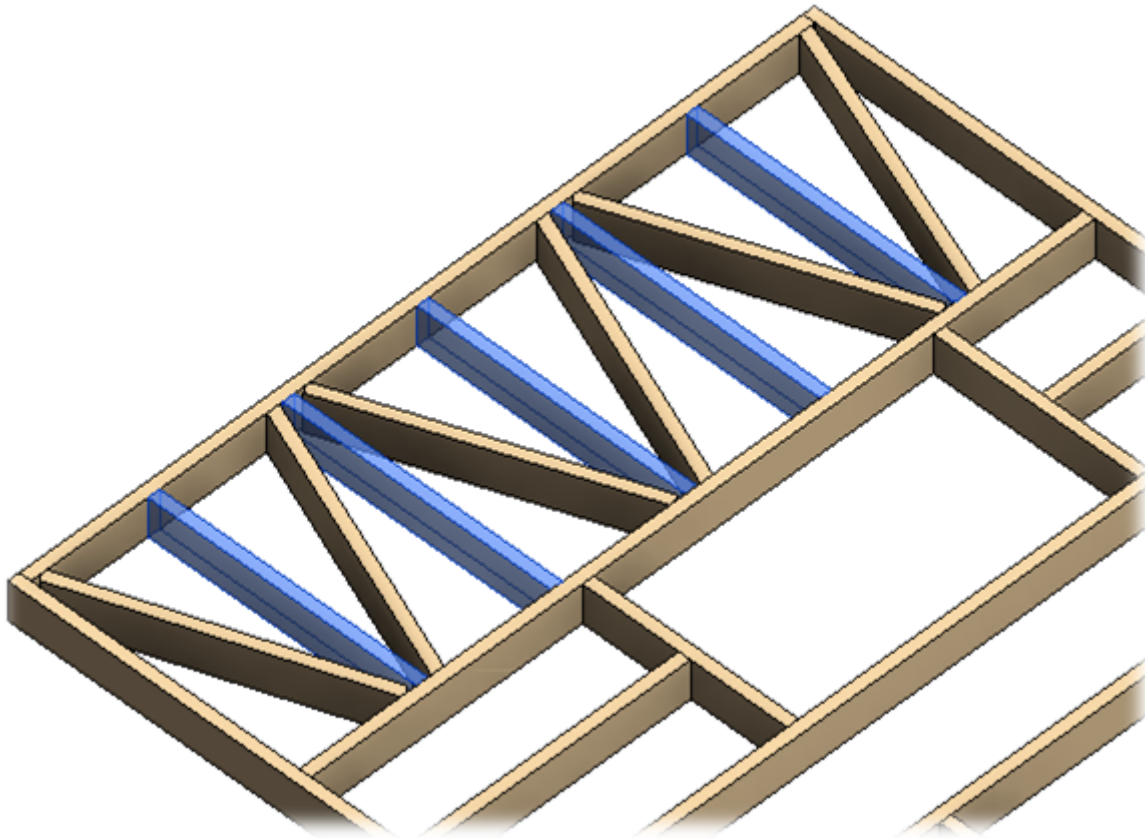
Add as Virtual

Add Bridging/Nogging – enables options for adding horizontal bridging/nogging in the brace group.

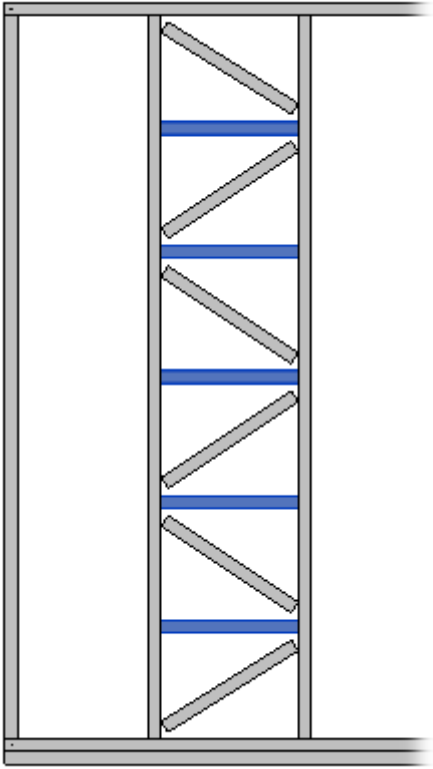
Horizontal braces can be disabled:



Example with wood floor:



Example with metal frame - horizontal braces can be disabled:




Add every Second

Brace Group

Bridging/Nogging

Add Bridging/Nogging

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

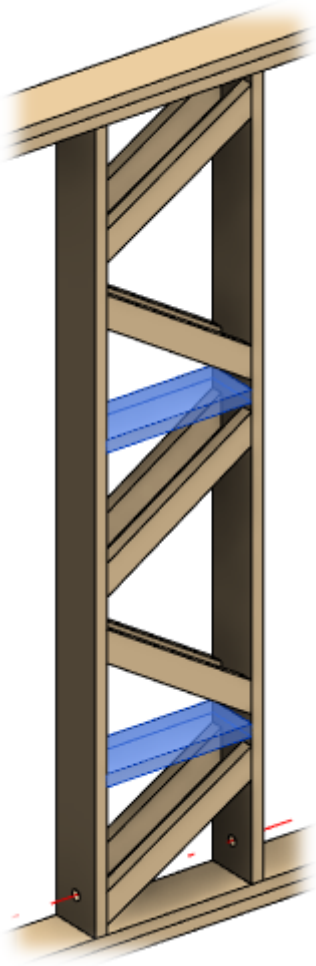
Add every Second

Start from Even Number

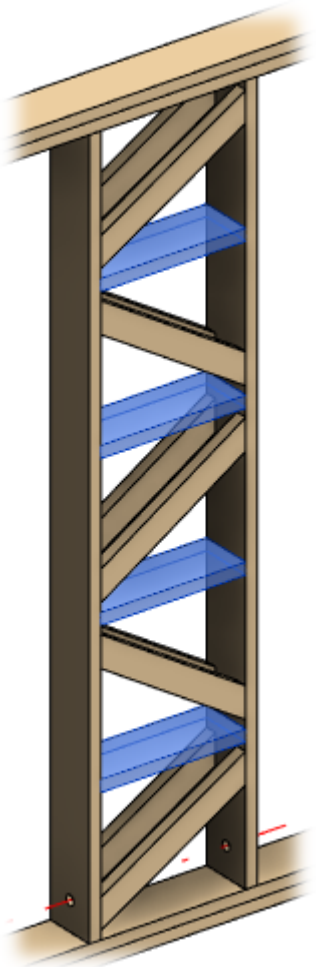
Add as Virtual

Add every Second – adds every second horizontal brace in the brace group.

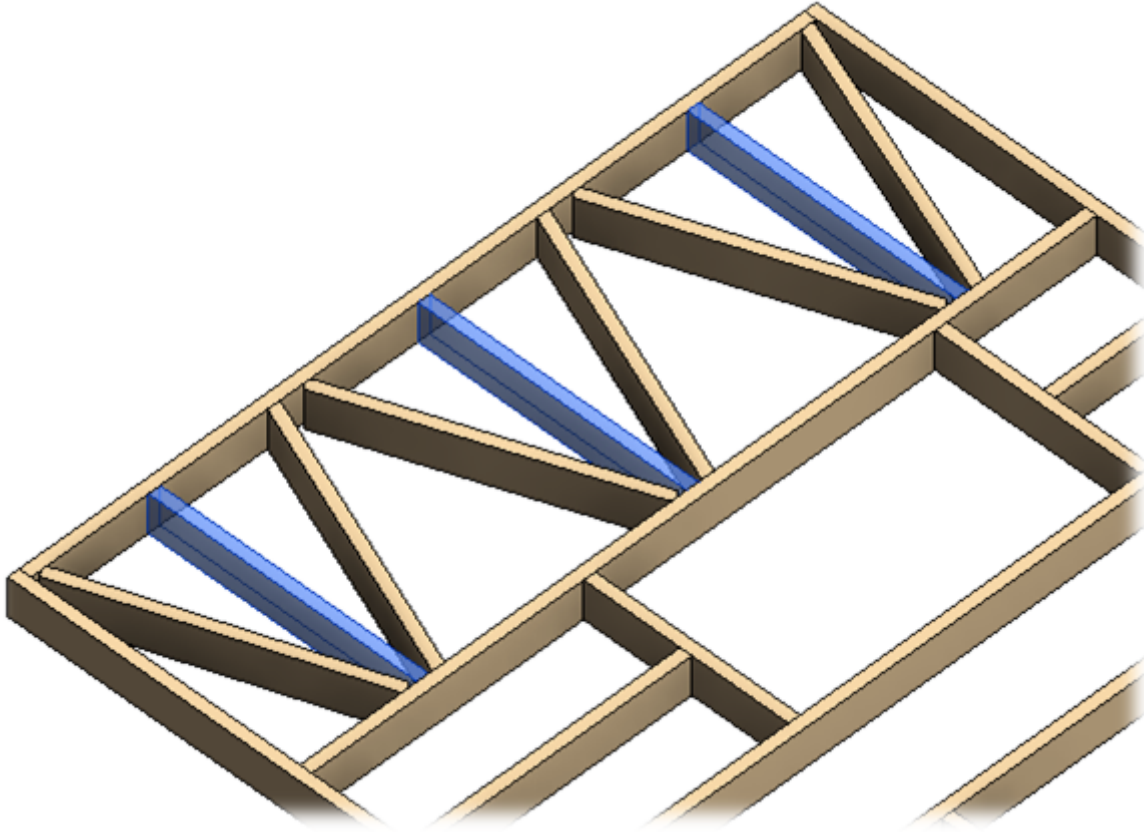
*Example: when **Add every Second** is switched ON:*



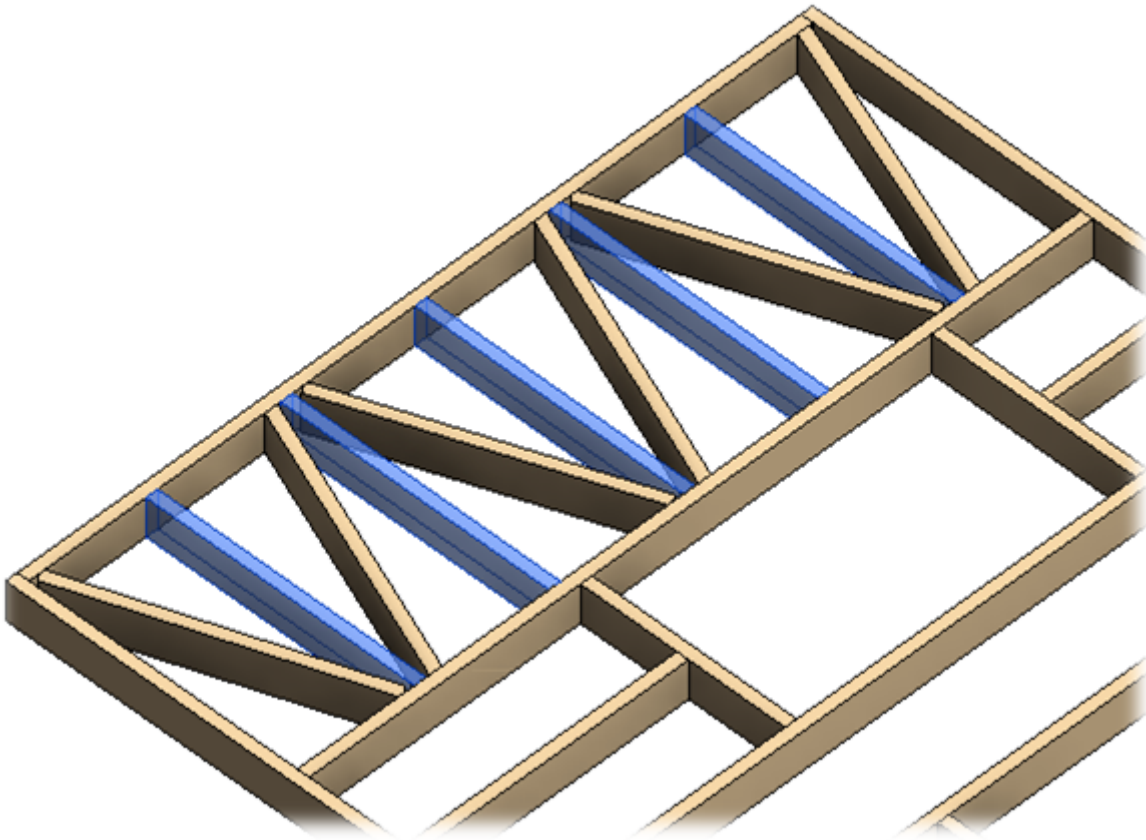
*Example: when **Add every Second** is switched OFF:*



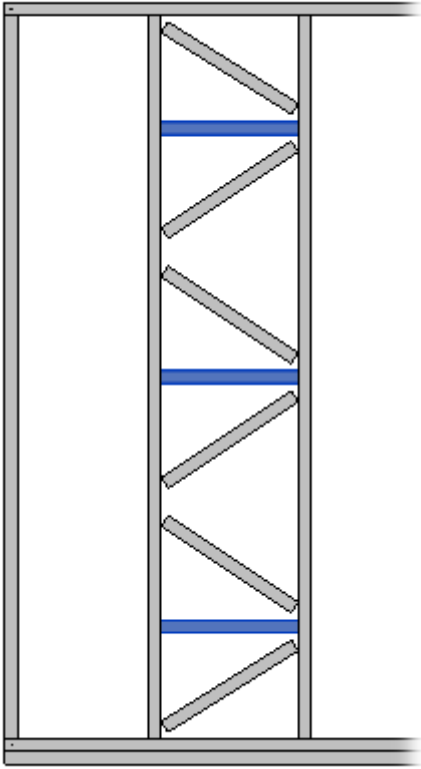
*Example with wood floor - when **Add every Second** is switched ON:*



*Example with wood floor - when **Add every Second** is switched OFF:*



*Example with metal frame - when **Add every Second** is switched ON:*




Start from Even Number

Brace Group

Bridging/Nogging

Add Bridging/Nogging

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

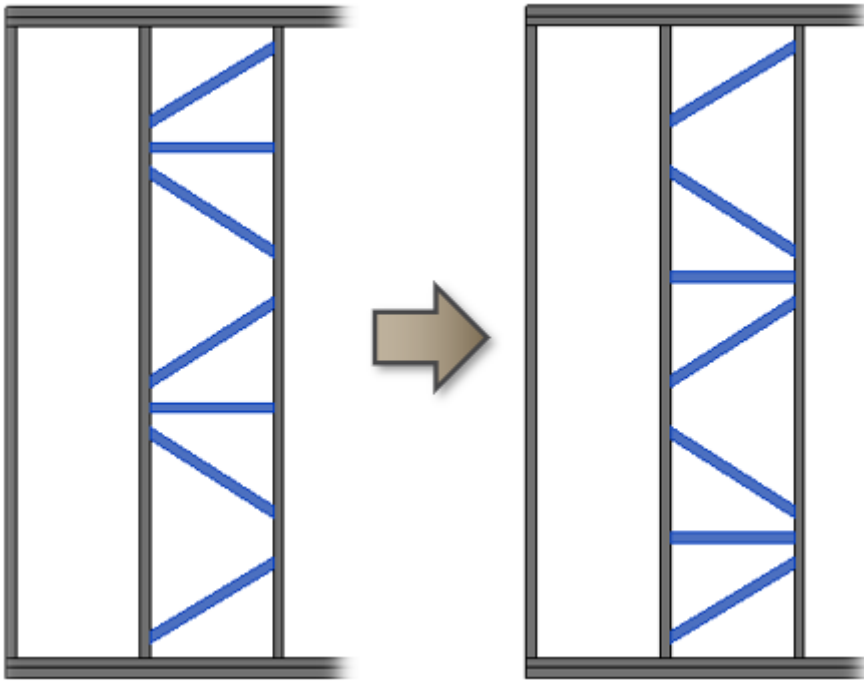
Add every Second

Start from Even Number

Add as Virtual

Start from Even Number – possible option when **Add every Second** option is enabled. It starts every second horizontal element from even number.

*Example, in the left side **Start from Even Number** is switched OFF, in the right - switched ON:*




Add as Virtual

Brace Group

Bridging/Nogging

Add Bridging/Nogging

Type  M_WF Plate
LMBR 45x120

Width (b) 4.5

Depth (h,d) 12

Define Depth (h,d) by Layer Thickness

Rotate 90°

Extend Ends (new Families)

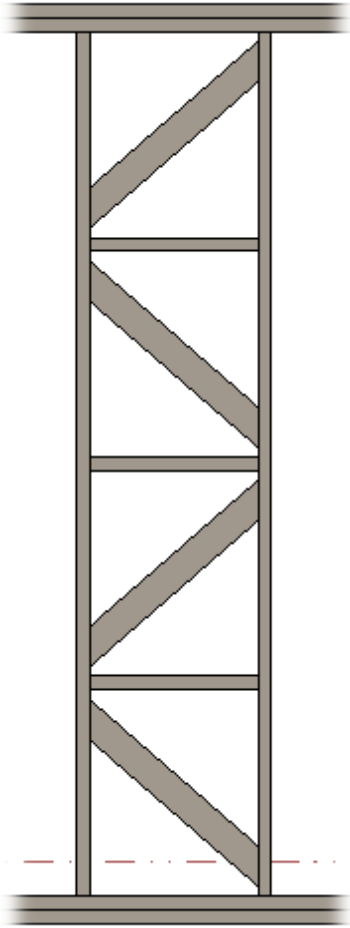
Add every Second

Start from Even Number

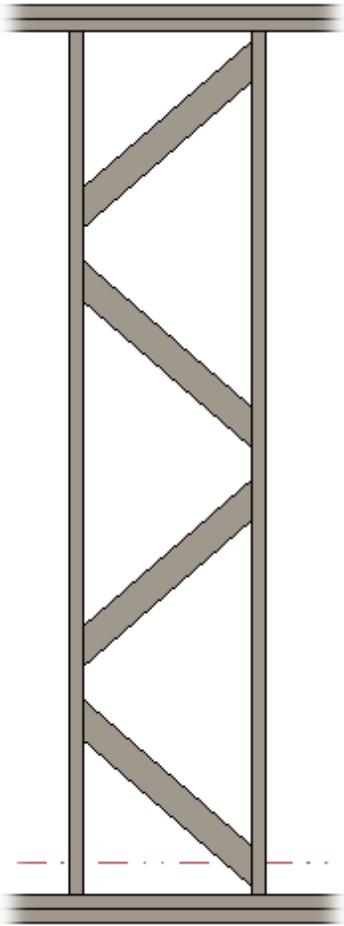
Add as Virtual

Add as Virtual – deletes horizontal bridging/nogging in the brace group but keeps the distances between diagonal braces the same as if there were horizontal braces.

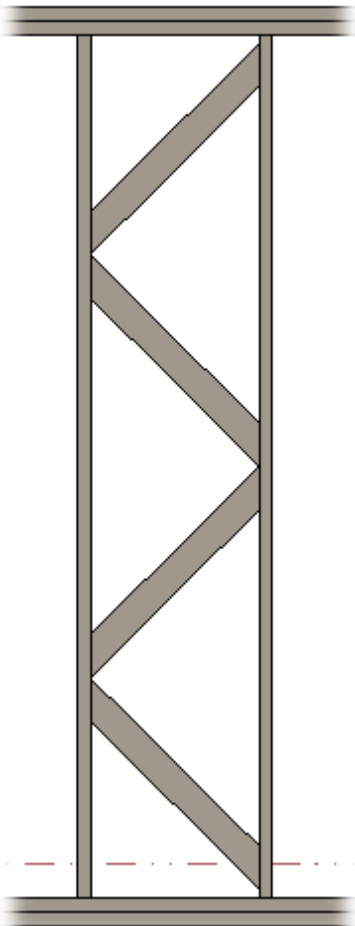
*Example: when **Add as Virtual** is switched OFF:*



*Example: when **Add as Virtual** is switched ON. The distances between diagonal braces are the same as if there were horizontal braces:*



*Example: when **Add Bridging/Nogging** is switched OFF. The distances between diagonal braces are recalculated:*



Calculation from Bottom Plate Axis

Brace Group	
Settings	
Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

Calculation from Bottom Plate Axis – starts calculation from bottom plate axis.

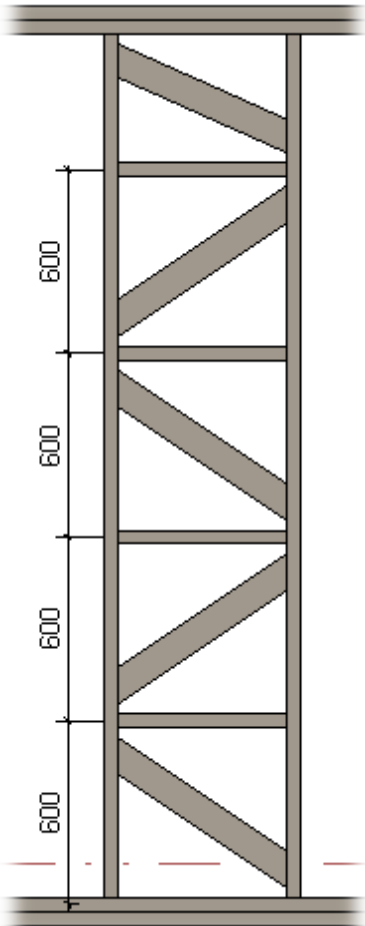
Spacing Type

Brace Group	
Settings	
Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

Spacing Type – define spacing calculation rule: **Fixed Spacing, Maximal Spacing, Fixed Angle, Fixed Number and Fixed Spacing**, or **Fixed Number**.

The options below will change regarding this setting.

Example: when *Spacing Type = Fixed Spacing* and *Spacing = 600*:



Brace Connection Offset from Plate/Bridging/Nogging

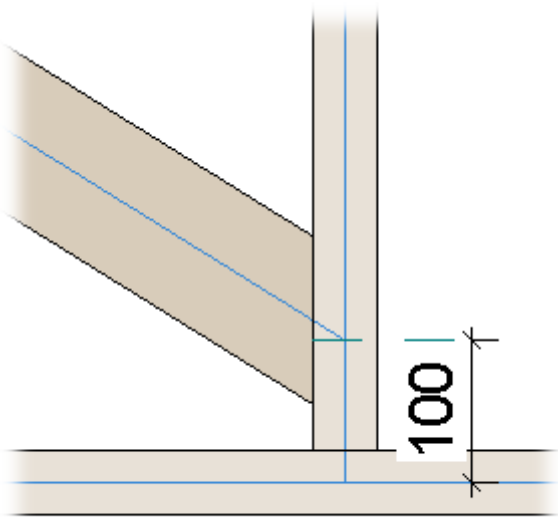
Brace Group

Settings

Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

Brace Connection Offset from Plate/Bridging/Nogging – brace offset from connection point with a plate, bridging, or nogging.

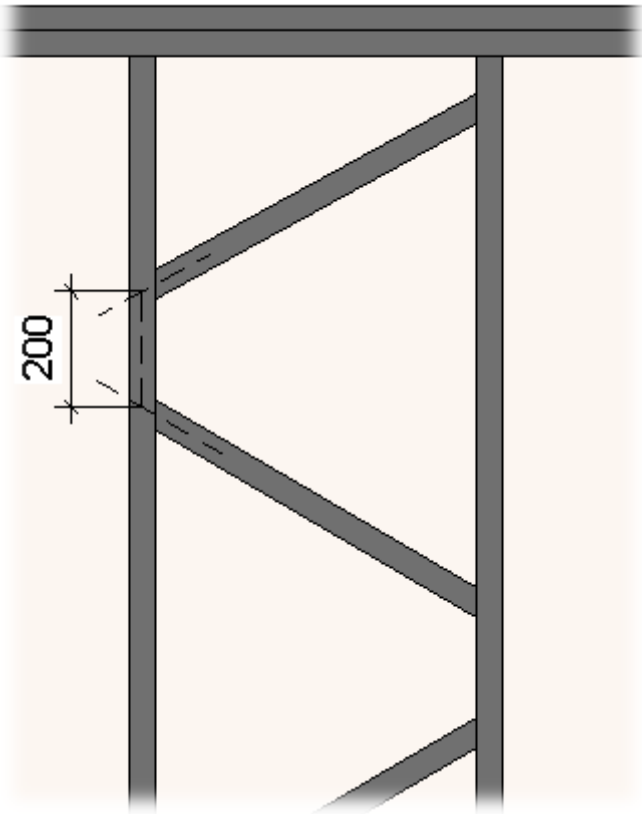
*Example: when **Brace Connection Offset from Plate/Bridging/Nogging** = 100:*



Connection Offset between Brace Elements

Brace Group	
Settings	
Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

Connection Offset between Brace Elements – defines the offset between brace elements.



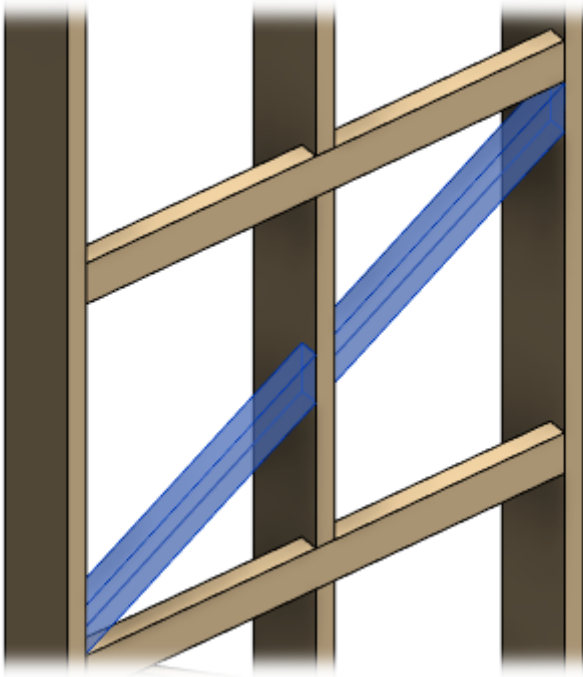
Brace

Brace Group	
Settings	
Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

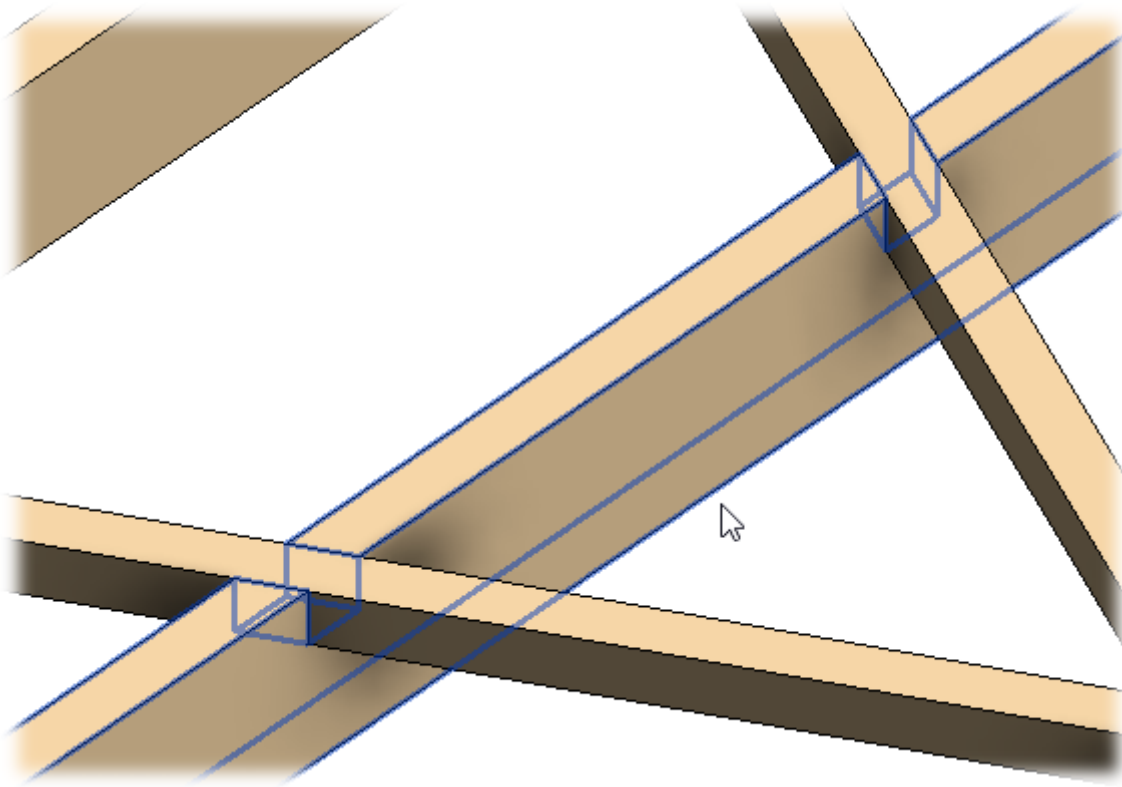
Brace – select brace and stud connection cutting type.

Possible options: **Don't Cut**, **Cut Studs** and **Cut Bracing**.

*Example with wood wall - when **Cut Bracing** is selected:*



*Example with wood floor - when **Cut Joists** is selected:*



Bridging/Nogging

Brace Group

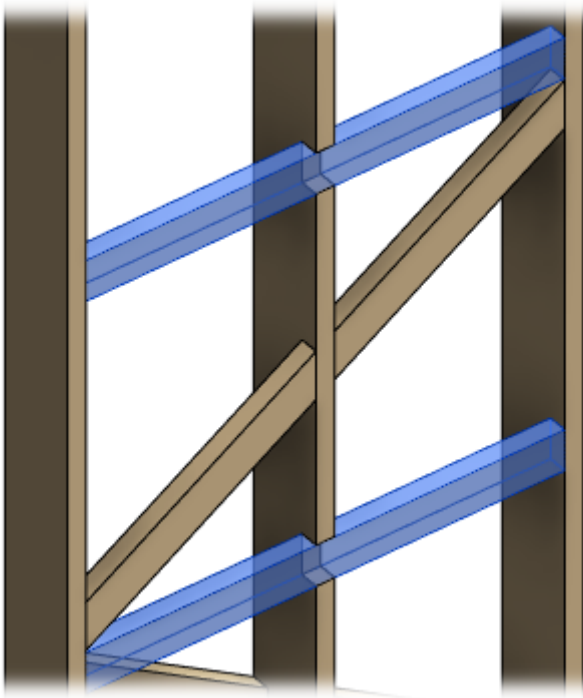
Settings

Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

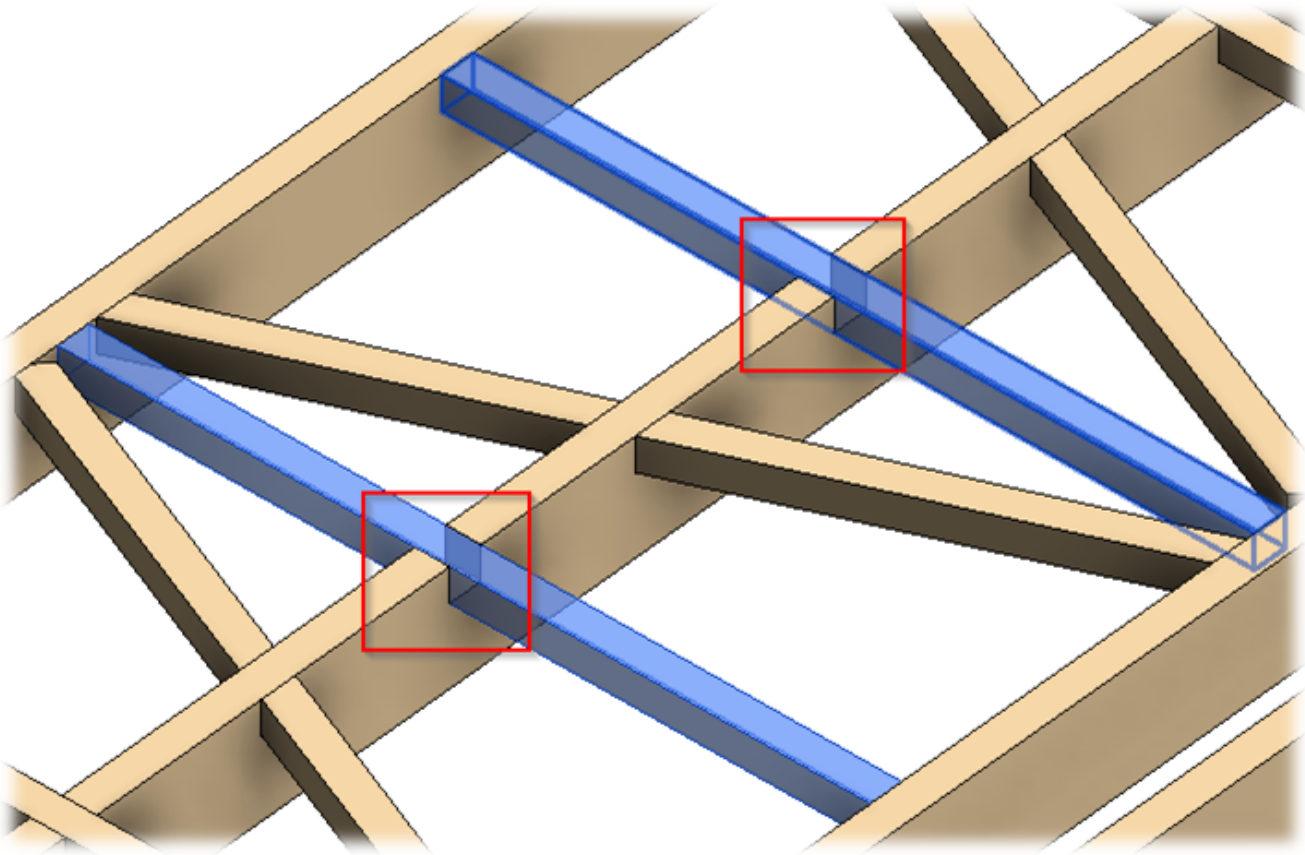
Bridging/Nogging – select bridging/nogging and stud connection cutting type.

Possible options: **Don't Cut**, **Cut Bridging/Nogging** and **Cut Bracing**.

*Example with wood wall - when **Cut Studs** is selected:*



*Example with wood floor - when **Cut Joists** is selected:*



Frame Side

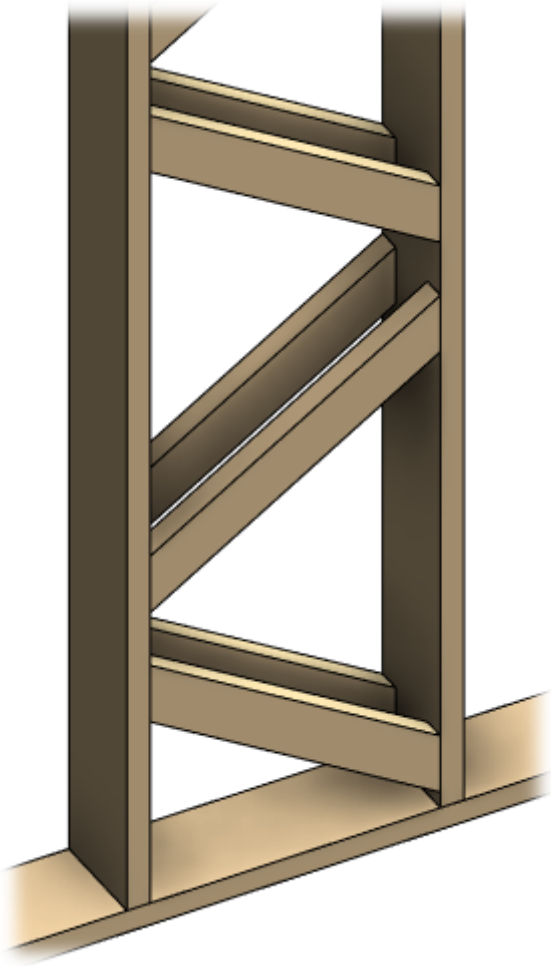
Brace Group

Settings

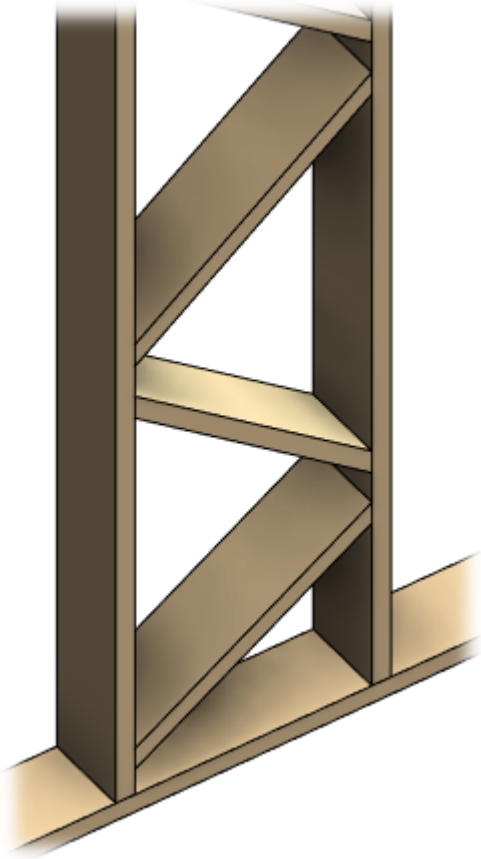
Calculation from Bottom Plate Axis	<input type="checkbox"/>
Spacing Type	Maximal Spacing
Angle	45
Fixed Number	2
Spacing	600
Brace Connection Offset from Plate/Bridging/Nogging	100
Connection Offset between Brace Elements	200
Brace	Don't Cut
Bridging/Nogging	Don't Cut
Frame Side	One - Centered
Delete	<input type="checkbox"/>
Build in Place	<input type="checkbox"/>

Frame Side – select whether a brace group should be applied in the center, external, internal, or on two sides of the frame.

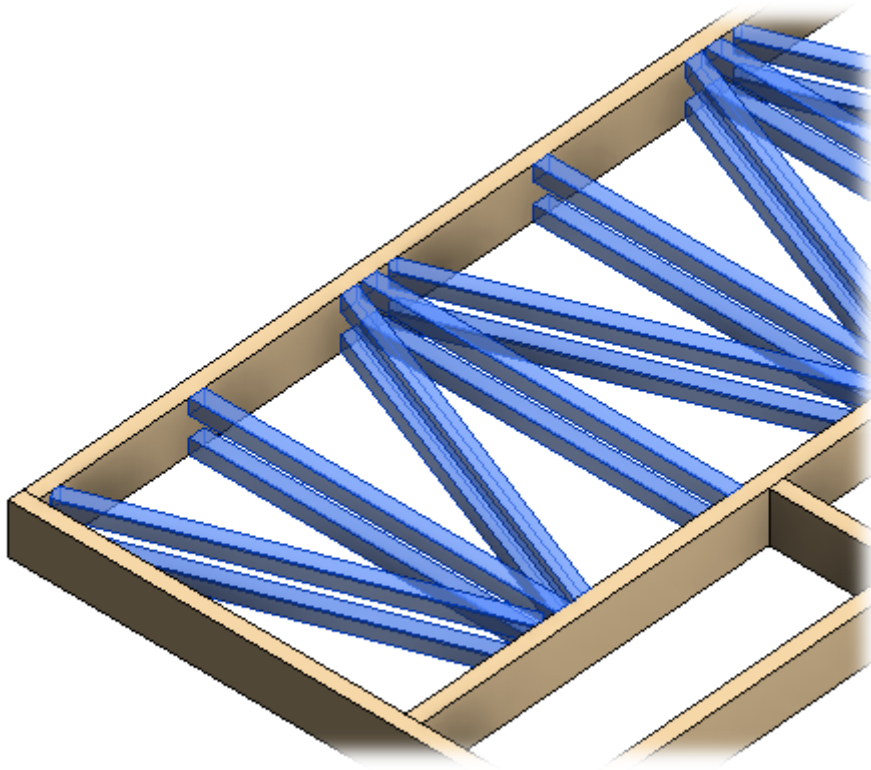
*Example with wood wall - when **Frame Side = Two - Sided**:*



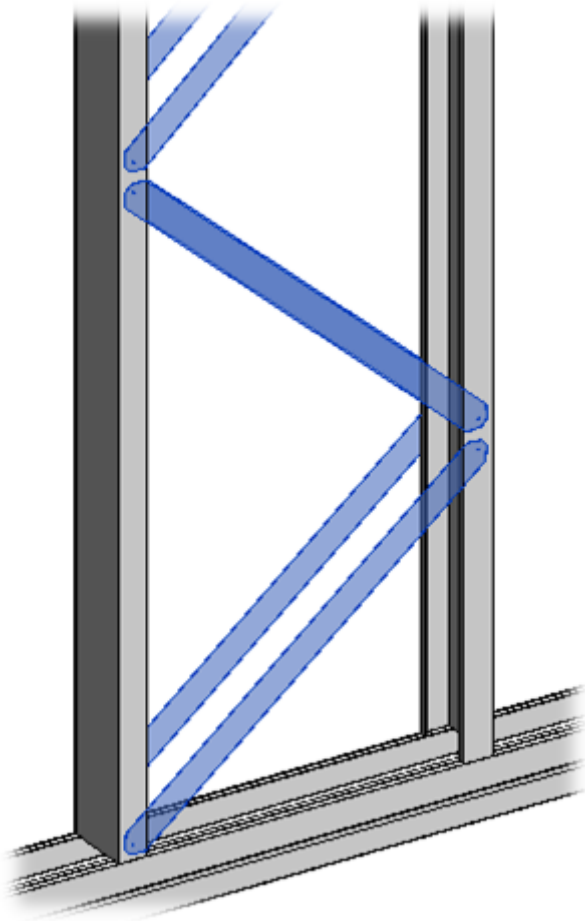
*Example with wood wall - when **Frame Side = Center:***



*Example with wood floor - when **Frame Side = Two - Sided:***



*Example with metal frame - when **Frame Side = Two - Sided**:*



Build in Place

Brace Group

Settings

Calculation from Bottom Plate Axis

Spacing Type Maximal Spacing

Angle 45

Fixed Number 2

Spacing 600

Brace Connection Offset from Plate/Bridging/Nogging 100

Connection Offset between Brace Elements 200

Brace Don't Cut

Bridging/Nogging Don't Cut

Frame Side One - Centered

Delete

Build in Place

Build in Place – writes Yes/No information into the brace instance parameter if it is build-in-place or is prefabricated with whole wall frame. Later this parameter can be used in schedules or view filters.

Example with wood frame:

Properties

M_WF Plate
LMBR 45x200

Structural Framing (Other) (1) Edit Type

Constraints

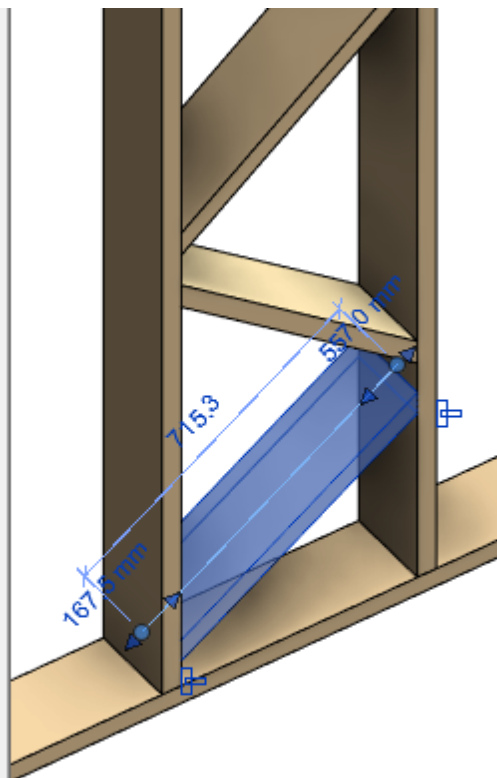
Reference Level	Level 1
Start Level Offset	167.5
End Level Offset	557.0
Cross-Section Rotation	-90.00°

Geometric Position

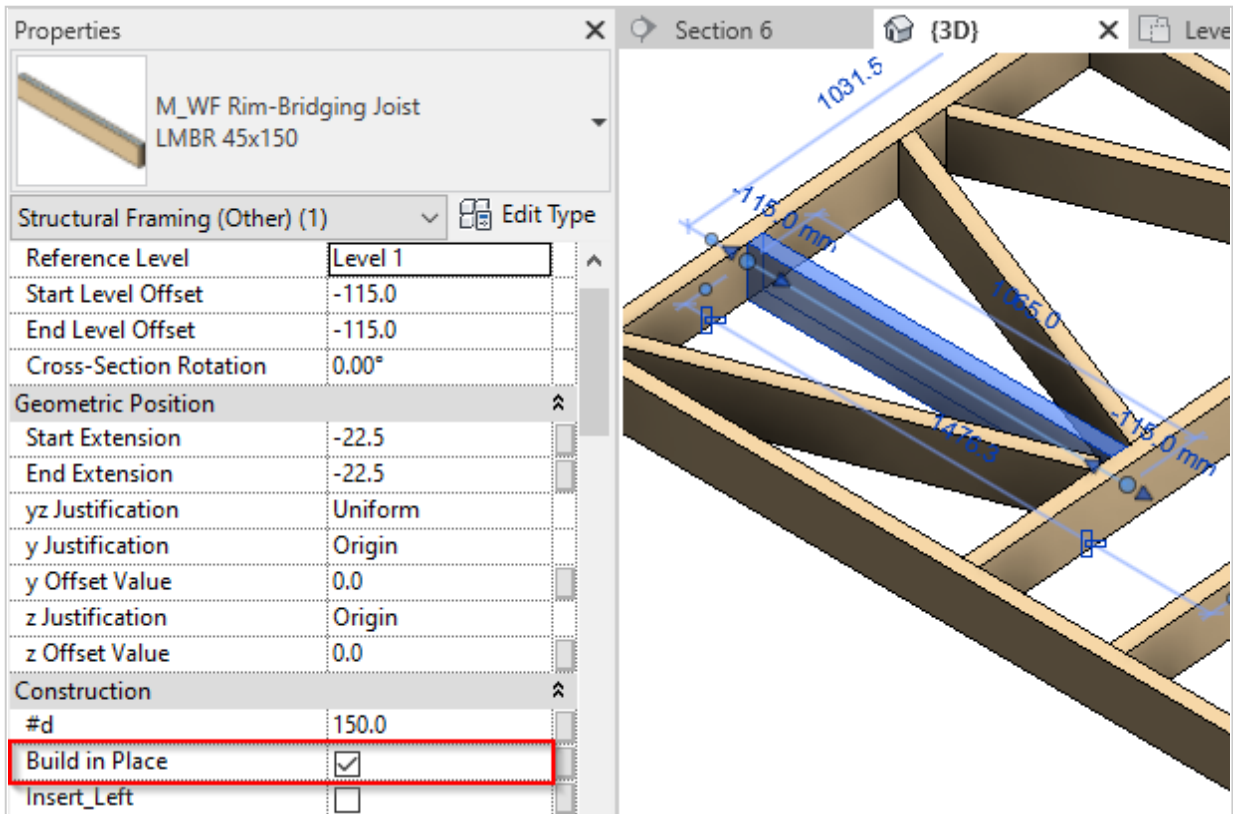
Start Extension	-26.8
End Extension	-26.8
yz Justification	Uniform
y Justification	Origin
y Offset Value	0.0
z Justification	Origin
z Offset Value	0.0

Construction

#d	200.0
Build in Place	<input checked="" type="checkbox"/>
Insert_Left	<input type="checkbox"/>
Insert_Right	<input type="checkbox"/>



Example with wood floor:



Example with metal frame:

