FRAMING CONFIGURATION – Modify Configuration Settings

Modified on: Wed, 14 Jul, 2021 at 4:36 PM

Align Stud Spacing with Frame and Openings Sides

Align Stud Spacings with Frame and Openings Sides		^
Align with:	None ~	
Use First/Last Spacing Distance	None	
had a Kine a Calid	Opening - Right Side	
Include Kings with no Solid	Right King - Left Side	
	Right King - Axis	
	Save	Close

Align Stud Spacing with Frame and Openings Sides – option to align stud/joist spacing with opening right side, right king-left side or right king-axis.

Example: Studs/Joists are aligned with the right side of the opening (opening right side):



Example: Studs/Joists are aligned with the left side of the right king (right king-left side):



Example: Studs/Joists are aligned with the axis of the right king (right king-axis):



Recalculate First/Last Stud Spacing for External Corners

Parameters Depend on Configuration Name		^
Recalculate First/Last Stud Spacing for External Corners		
Align with Main Frame		
Automatically Align Opening Cripples with Studs	✓	
Automatically Align Opening Cripples with Nearest Left Stud		
Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
Delete or Move Studs when they Collide	Delete v	
Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	\checkmark	~

Recalculate First/Last Stud Spacing for External Corners – recalculates position of first or last stud. Ticking this option ensures good sheathing coverage from external corners.

Example with metal frames:



Example with wooden frames:



Align with Main Frame

٢	Parameters Depend on Configuration Name		^
	Recalculate First/Last Stud Spacing for External Corners		
	Align with Main Frame		
	Automatically Align Opening Cripples with Studs		
	Automatically Align Opening Cripples with Nearest Left Stud		
	Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
	Delete or Move Studs when they Collide	Delete v	
	Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	\checkmark	~

Align with Main Frame – aligns frame with main frame. Mostly used for Vertical Nailer or Secondary Frame layers.

Example with wooden frames:



Example with metal frames:

		1		
_	I		 1	

Automatically Align Opening Cripples with Studs (in Wall+, Wall+M) or

Automatically Align Opening Cripples with Joists (in Floor+, Floor+M, Roof+, Roof+M)

٢	Parameters Depend on Configuration Name		^
	Recalculate First/Last Stud Spacing for External Corners		
	Align with Main Frame		
	Automatically Align Opening Cripples with Studs		
	Automatically Align Opening Cripples with Nearest Left Stud		
	Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
	Delete or Move Studs when they Collide	Delete v	
	Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	✓	~

Automatically Align Opening Cripples with Studs/Joists – aligns cripples below and above openings with main studs/joists.







Automatically Align Opening Cripples with Nearest Left Stud

(in Wall+, Wall+M)

Automatically Align Opening Cripples with Nearest Left Joist

(in Floor+, Floor+M, Roof+, Roof+M)

را	Parameters Depend on Configuration Name		^
	Recalculate First/Last Stud Spacing for External Corners		
	Align with Main Frame		
	Automatically Align Opening Cripples with Studs	\checkmark	
	Automatically Align Opening Cripples with Nearest Left Stud		
	Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
	Delete or Move Studs when they Collide	Delete v	
	Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	\checkmark	~

Automatically Align Opening Cripples with Nearest Left Stud/Joist – aligns cripples below and above openings with the nearest left stud/joist. This option is usually used when the main studs/joists are distributed from both sides.

Example: When Automatically Align Opening Cripples with Nearest Left Stud/Joist is ticked on:

FRAMING CONFIGURATION – Modify Configuration Settings : AGACAD



Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing

٢	Parameters Depend on Configuration Name		^
	Recalculate First/Last Stud Spacing for External Corners		
	Align with Main Frame		
	Automatically Align Opening Cripples with Studs	\checkmark	
	Automatically Align Opening Cripples with Nearest Left Stud		
	Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
	Delete or Move Studs when they Collide	Delete V	
	Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	\checkmark	~

Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing – allows changing First/Last Spacing from Wall/Floor/Roof Framing to be up to twice that of the Stud/Joist Spacing.

Example with wood: When Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing is ticked OFF:



Example: When Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing is ticked ON:



Example with metal: When Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing is ticked OFF:



3/09	/21, 09:25				FRAMING	CONFIGURATION – Modify Configuration	n Settings
C	ommon	Vertical Stud	Top Plate	Bot	tom Plate	Modify Configuration Settings	
	Туре				M_MF C	+C Stud : C10251-15	¥
	Width (b)			5.08		
	Depth (h,d)			10.2		
	Define [Depth (h,d) by l	Layer Thick	ness	✓		
	Rotate 1	180°					
	Add Stu	ıds			✓		
	Align w	ith Project Base	Point				
	Stud Sp	acing			600		
6	First/La	st Spacing —					
	Spacing)			800		
	First/Las	st Spacing					
		Use for First					
	0) Use for Last) Use for Both					
	Calcula	ted Spacing —					
	Start S	Spacing			200		
	End S	pacing			400		

Example: When Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing is ticked ON:



109/21, 09.23						ation Settings
Common	Vertical Stud	Top Plate	Bott	om Plate	Modify Configuration Settings	
Туре				M_MF C+	C Stud : C10251-15	Ŷ
Width (b)			5.08		
Depth (h,d)			10.2		
Define l	Depth (h,d) by l	Layer Thick	ness	✓		
Rotate	180°					
Add Stu	ıds			✓		
Align w	ith Project Base	e Point				
Stud Sp	acing			600		
⊂ First/La	st Spacing —					
Spacing)		[800		
First/La	st Spacing					
) Use for First) Use for Last) Use for Both					
Calcula	ated Spacing —					
Start	Spacing			800		
End S	pacing			400		

Delete or Move Studs when they Collide (in Wall+, Wall+M)

Delete or Move Joists when they Collide (in Floor+, Floor+M, Roof+, Roof+M)

٢	Parameters Depend on Configuration Name		^
	Recalculate First/Last Stud Spacing for External Corners		
	Align with Main Frame		
	Automatically Align Opening Cripples with Studs	\checkmark	
	Automatically Align Opening Cripples with Nearest Left Stud		
	Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
	Delete or Move Studs when they Collide	Delete v	
	Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	\checkmark	~

Delete or Move Studs/Joists when they Collide – choose what to do with studs/joists when they collide. (This function supports a more convenient framing workflow.)

Example with wood wall frame from plan view: If the internal wall is moved, it collides with the existing stud. The function allows the existing stud to be deleted or moved.

FRAMING CONFIGURATION – Modify Configuration Settings : AGACAD



Stud was moved:



Stud was deleted:



Example with metal wall frame from plan view:



For a more convenient framing workflow, King Stud stays and deletes existing Stud from the connection:





Example: The trimming joist stays while the existing joist is moved or deleted from the connection.



Connect Long Bridging/Nogging to Internal Opening King Joist/Stud

٢	arameters Depend on Configuration Name		^
	Recalculate First/Last Stud Spacing for External Corners		
	Align with Main Frame		
	Automatically Align Opening Cripples with Studs	✓	
	Automatically Align Opening Cripples with Nearest Left Stud		
	Allow First/Last Spacing to be up to twice size of Stud/Joist Spacing		
	Delete or Move Studs when they Collide	Delete ~	
	Connect Long Bridging/Nogging to Internal Opening King Joist/Stud	\checkmark	~

Connect Long Bridging/Nogging to Internal Opening King Joist/Stud – connects bridging/nogging with internal opening king studs or trimming joists.

Example: Connect Long Bridging/Nogging to Internal Opening King Joist/Stud is ticked OFF:

FRAMING CONFIGURATION - Modify Configuration Settings : AGACAD



Example: Connect Long Bridging/Nogging to Internal Opening King Joist/Stud is ticked ON:



Connect Headers to Internal King Stud/Trimming Joist

	Connect Headers to Internal King Stud/Trimming Joist	✓
	Connect Top Plate Support Headers to Internal King Stud/Trimming Joist	✓
	Separate Joined Opening's Preassemblies	
	Top Plate Support: Select Configuration by Full Width of Joined Opening	
	King\Trimmer: Select Configuration by Full Width of Joined Opening	
	Header: Select Configuration by Full Width of Joined Opening	
	Allow Brace and Opening intersection	

Connect Headers to Internal King Stud/Trimming Joist – headers can be connected to internal or external kings or trimming joists.

Example with wood: Connect Headers to Internal King Stud/Trimming Joist is ticked OFF:



Example: Connect Headers to Internal King Stud/Trimming Joist is ticked ON:



Example with metal:



Connect Top Plate Support Headers to Internal King Stud/Trimming Joist

	Connect Headers to Internal King Stud/Trimming Joist	\checkmark		^
	Connect Top Plate Support Headers to Internal King Stud/Trimming Joist	t 🗹	þ	
ľ	Separate Joined Opening's Preassemblies			
	Top Plate Support: Select Configuration by Full Width of Joined Opening	J 🗆		
	King\Trimmer: Select Configuration by Full Width of Joined Opening			
	Header: Select Configuration by Full Width of Joined Opening			
	Allow Brace and Opening intersection			\sim

Connect Top Plate Support Headers to Internal King Stud/Trimming Joist – top plate supports can be connected to internal or external kings or trimming joists.

Example: Connect Top Plate Support Headers to Internal King Stud/Trimming Joist is ticked OFF:



Example: Connect Top Plate Support Headers to Internal King Stud/Trimming Joist is ticked ON:



Separate Joined Opening's Preassemblies

Connect Headers to Internal King Stud/Trimming Joist		^
Connect Top Plate Support Headers to Internal King Stud/Trimming Joist	\checkmark	
Separate Joined Opening's Preassemblies		
Top Plate Support: Select Configuration by Full Width of Joined Opening		
King\Trimmer: Select Configuration by Full Width of Joined Opening		
Header: Select Configuration by Full Width of Joined Opening		
Allow Brace and Opening intersection		~

Separate Joined Opening's Preassemblies – this feature lets you make separate preassemblies for openings that are part of a joined opening — and the preassemblies will exclude other elements (like top plate supports, etc.) that extend across the joined opening.

Top Plate Support: Select Configuration by Full Width of Joined Opening

Connect Headers to Internal King Stud/Trimming Joist	✓	^
Connect Top Plate Support Headers to Internal King Stud/Trimming Joist	\checkmark	
Separate Joined Opening's Preassemblies		
Top Plate Support: Select Configuration by Full Width of Joined Opening		
King\Trimmer: Select Configuration by Full Width of Joined Opening		
Header: Select Configuration by Full Width of Joined Opening		
Allow Brace and Opening intersection		~

Top Plate Support: Select Configuration by Full Width of Joined Opening – top plate support can be created according to opening width or full width of joined openings.

Example with wood:

FRAMING CONFIGURATION – Modify Configuration Settings : AGACAD



^ I	Window Framing	Door Framing	Opening Framing	Window - Window Join R	Framin	ng Window - D	Door Join Framing
Common Settings	📄 🗙 🖬 Edit (Configurations					
	Non-structural W	alls. Width of Op	penings:				
Wall Framing	From	То	Configuration			Preassembled	Opening Element Preassembled
	0	1500	M_Window Non-	bearing Framing	~		
Opening Framing	1500	10000	M_Window Non-	bearing Framing 1501	~		
L Connection							
	Structural Walls.	Width of Openin	gs:				
End Connection	From	То	Configuration			Preassembled	Opening Element Preassembled
	0	1000	M_Window Beari	ng Framing	~		
V Connection	1000	10000	M_Window Beari	ng Framing 1001	~		

Example with metal:



~ ^	Window Fi	raming	Door Framing	Opening Framing	Window - Window Join Fram	ing Window - D	oor Join Framing
Common Settings Edit Configurations							
	- Non-struc	ctural Wa	alls. Width of Op	enings:			
Wall Framing	Fro	om	То	Configuration		Preassembled	Opening Element Preassembled
	0		1500	M_Window Non-	·bearing Framing Y		
Opening Framing	150	0	10000	M_Window Non-	bearing Framing 1501 🛛 👻		
L Connection		Edit C	onfigurations				
	Structural	Walls. V	Vidth of Openin	gs:			
End Connection	Fro	m	То	Configuration		Preassembled	Opening Element Preassembled
	0		1000	M_Window Bear	ing Framing 🛛 👻		
V Connection	100	0	10000	M_Window Bear	ing Framing 1001 🛛 👻		

King\Trimmer: Select Configuration by Full Width of Joined Opening

Connect Headers to Internal King Stud/Trimming Joist		^
Connect Top Plate Support Headers to Internal King Stud/Trimming Joist		
Separate Joined Opening's Preassemblies		
Top Plate Support: Select Configuration by Full Width of Joined Opening		
King\Trimmer: Select Configuration by Full Width of Joined Opening		
Header: Select Configuration by Full Width of Joined Opening		
Allow Brace and Opening intersection		~

King\Trimmer: Select Configuration by Full Width of Joined Opening – kings or trimmers can be created according to opening width or full width of joined openings.

Header: Select Configuration by Full Width of Joined

Opening

Connect Headers to Internal King Stud/Trimming Joist		^
Connect Top Plate Support Headers to Internal King Stud/Trimming Joist		
Separate Joined Opening's Preassemblies		
Top Plate Support: Select Configuration by Full Width of Joined Opening		
King\Trimmer: Select Configuration by Full Width of Joined Opening		
Header: Select Configuration by Full Width of Joined Opening		
Allow Brace and Opening intersection		~

Header: Select Configuration by Full Width of Joined Opening – header can be created according to opening width or full width of joined openings.

Allow Brace and Opening Intersection

_			
	Connect Headers to Internal King Stud/Trimming Joist		^
	Connect Top Plate Support Headers to Internal King Stud/Trimming Joist		
	Separate Joined Opening's Preassemblies		
	Top Plate Support: Select Configuration by Full Width of Joined Opening		
	King\Trimmer: Select Configuration by Full Width of Joined Opening		
	Header: Select Configuration by Full Width of Joined Opening		
	Allow Brace and Opening intersection		~

Allow Brace and Opening Intersection – if ticked, allows to create braces which crosses openings. This option is usually used when prefabricated frame is transported and braces could go through openings to make the frame more stable.

Example:



Minimum Window/Door/Generic/System Opening Width\Height

Frame Openings		^
Minimum Window Width\Height	0	
Minimum Door Width\Height	0	
Minimum Generic Opening Width\Height	0	
Minimum System Opening Width\Height	310	
Enable Partial Opening Analysis		
		\sim

Minimum Window/Door/Generic/System Opening Width\Height – define minimal sizes for windows, doors, generic or system openings which will be framed.

Example, Minimum System Opening Width\Height = 0, then the opening is framed:



*Example, Minimum System Opening Width**Height = 310, then the opening is not framed:*



Enable Partial Opening Analysis

CFrame Openings		^
Minimum Window Width\Height	0	
Minimum Door Width\Height	0	
Minimum Generic Opening Width\Height	0	
Minimum System Opening Width\Height	310	
Enable Partial Opening Analysis		

Enable Partial Opening Analysis – turns on more complicated calculation method and analysis for the frame when openings are created just for few roof layers. This method is quite rare and slows down framing speed, so could be switched on separately.

Enable New Algorithm for Wood Framing using New Families

New Families - New Algorithm Enable New Algorithm for Wood Framing using New Families

Enable New Algorithm for Wood Framing using New Families – enables new, faster algorithm for wood framing using new families from new version. This option is automatically switched after installing new **Wall+**, **Floor+**, **Roof+** version with new configurations. The new families are easier to use than the old ones that they have replaced, and you'll find that they greatly expand your framing possibilities.

Advantages of the new families:

- The new families are simple and speed up wall/floor/roof framing by a factor of 2.
- The new families replace and expand the possibilities of the old families.
- The new framing technology is more flexible, making it possible to get good results in all situations faster than using the old families.

Here is a side-by-side list of the new **Wood Framing Roof+** families and the old families being replaced in Imperial projects. (For Metric projects, there will be M_ at the beginning):

New families for new Roof+2021 configurations	Old families for old configurations
I_RWF Common Joist.rfa	I_Roof_Frame Common Rafter.rfa I_Roof_Frame Common Joist.rfa

I_RWF Rim-Bridging Joist.rfa	I_Roof_Frame Valley_Hip Board.rfa I_Roof_Frame Trimmer.rfa I_Roof_Frame Trimmer Joist.rfa I_Roof_Frame Trapezoid Girder Joist.rfa I_Roof_Frame Top Trimmer_Bevelled.rfa I_Roof_Frame Top Trimmer.rfa I_Roof_Frame Top Trap_Trimmer.rfa I_Roof_Frame Horizontal Board.rfa I_Roof_Frame Header.rfa I_Roof_Frame Fascia & Trimmer.rfa I_Roof_Frame Bace Board.rfa I_Roof_Frame Bottom Trimmer.rfa I_Roof_Frame Batten Joist.rfa
I_RWF Rim-Bridging I-Joist.rfa I_RWF Common I-Joist.rfa	I_Roof_Frame Trimmer I-Joist.rfa I_Roof_Frame Common Rafter I-Joist.rfa I_Roof_Frame Common I-Joist.rfa
I_RWF Valley Rafter.rfa I_RWF Valley Rafter I-Joist.rfa I_RWF Hip Rafter.rfa I_RWF Hip Rafter I-Joist.rfa	I_Roof_Frame Valley Rafter.rfa I_Roof_Frame Valley Rafter I-Joist.rfa I_Roof_Frame Hip Rafter.rfa I_Roof_Frame Hip Rafter I-Joist.rfa
I_RWF_Joist Diagonal Cut.rfa I_RWF_Joist Bottom Cut.rfa	
I_RWF Soffit Board_Profiled.rfa I_RWF Soffit Board.rfa I_RWF Soffit Board_Groove.rfa	I_Roof_Frame Soffit Board_MultiProfile.rfa I_Roof_Frame Soffit Board.rfa I_Roof_Frame Groove Board.rfa
I_RWF Ridge Joist.rfa I_RWF Girder Joist.rfa I_RWF Ridge I-Joist.rfa I_RWF Girder I-Joist.rfa	I_Roof_Frame Ridge Joist_Bevelled_Spec.rfa I_Roof_Frame Ridge Joist_Bevelled.rfa I_Roof_Frame Ridge Joist.rfa I_Roof_Frame Ridge I-Joist.rfa I_Roof_Frame Girder Joist_Bevelled.rfa I_Roof_Frame Girder Joist.rfa I_Roof_Frame Trapezoid Girder Joist.rfa
I_RWF Collar Joist.rfa I_RWF Collar I-Joist.rfa I_RWF Sleeper.rfa	I_Roof_Frame Collar Joist.rfa I_Roof_Frame Collar I-Joist.rfa I_Roof_Frame Sleeper Board.rfa

Here are the new framing configurations that we prepared to speed up your project. Again, they come with the new families:

Roof+. Default Fran	ming Parameters			-		×
Material Class:	Wood	V				
Configuration Type:	Frame	Ŷ				
Configuration Name:	M_Roof_Panel Fr	ame v	Save	Save As Rename Delete		
Common S	M_Roof_Panel Fr M_Roof_Rater Fra	ame ame	qs	Modify Settings Configuration Visil Modify Configuration Settings	oility	
		Use for all Framing Elements (exce	– pt Openings)			
Roof Com	mon Joists	Main Type of Joists		M_RWF Common Joist : LMBR 48x300		
~~		Width (b)		4.8		
	- min a	Depth (h,d)		30		
Opening Pr	aming	Main Type of Rim Joists		M_RWF Rim-Bridging Joist : LMBR 24x300		
		Width (b)		2.4		
End Conne	ction	Depth (h,d)		30		
		Define Depth (h,d) by Layer Thickn	ess	\checkmark		
Edge Joist	~	Roof Frame Panels		\checkmark		
<u> </u>		L		Save	Close	

Example: all these different blockings and headers were created using just one family:



Related blogpost:

http://www.aga-cad.com/blog/wood-framing-roof-for-revit-new-families-new-version-new-features (http://www.aga-cad.com/blog/wood-framing-roof-for-revit-new-families-new-version-new-features)

Minimal Top/Bottom Cripple Stud "Cut Length" (in Wall+, Wall+M) or

Minimal Top/Bottom Tile Joist "Cut Length" (in Floor+, Floor+M, Roof+, Roof+M)

Minimal Top Cripple Stud "Cut Length"	50
Minimal Bottom Cripple Stud "Cut Length"	50
Delete Cripple Studs if "Cut Length" is Less than Minimal	
Minimal Top Cripple Trimmer "Cut Length"	50
Minimal Bottom Cripple Trimmer "Cut Length"	50
Delete Trimmer Studs if "Cut Length" is Less than Minimal	\checkmark
Cut Log Ends	

Minimal Top/Bottom Cripple Stud/Tile Joist "Cut Length" – defines the minimum top/bottom cripple/tile joist cut length.

Delete Cripple Studs/Tile Joists if "Cut Length" is Less than Minimal – deletes cripples/tile joists if length is less than the value under **Minimal Top/Bottom Cripple Stud/Tile Joists "Cut Length"**.

Example: Top cripples studs have been deleted because length was less than 50:



Minimal Top/Bottom Trimmer "Cut Length"

Minimal Top Cripple Stud "Cut Length"	50	^
Minimal Bottom Cripple Stud "Cut Length"	50	
Delete Cripple Studs if "Cut Length" is Less than Minimal	\checkmark	
Minimal Top Cripple Trimmer "Cut Length"	50	
Minimal Bottom Cripple Trimmer "Cut Length"	50	
Delete Trimmer Studs if "Cut Length" is Less than Minimal		
Cut Log Ends		
		~

Minimal Top/Bottom Trimmer "Cut Length" – defines the minimum top/bottom trimmer cut length.

Delete Top/Bottom Trimmer Studs if "Cut Length" is Less than Minimal – deletes trimmers if length is less than the value under **Minimal Top/Bottom Trimmer "Cut Length"**.





Minimal Rim Joist Length (in Floor+, Floor+M, Roof+, Roof+M) or Minimal Plate Length (in Wall+, Wall+M)

Minimal Rim Joist Length	500	^
Minimal Bridging Length	150	
Minimal Stud/Joist Length	150	
Split the Flooring Strip if Width is less than	20	
Minimal Flooring Support Width for the Last Row	12.7	
Minimal Length of Split Rim/Joist	0	
Maximal Length of Split Rim/Joist	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	
Special Split Rule		~

Minimal Rim Joist Length or **Minimal Rim Joist Length** – defines the minimum length for the rim joist (in floors and roofs) or plate (in walls). If a length is less than the defined value, then the element will not be created.

Example: No top rim joist was created because the length is less than 500:



Minimal Bridging Length

Minimal Bridging Length	50	^
Minimal Stud/Joist Length	50	
Split the Siding Strip if Width is less than	80	
Minimal Siding Support Width for the Last Row	12.7	
Minimal Length of Split Plate	1000	
Maximal Length of Split Plate	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	

Minimal Bridging Length – defines the minimum length for the bridging. If a length is less than the defined value, then the element will not be created.

Example: No bridging was created in the red box because the length is less than 100:



Minimal Stud/Joist Length

Minimal Bridging Length	50	^
Minimal Stud/Joist Length	50	
Split the Siding Strip if Width is less than	80	
Minimal Siding Support Width for the Last Row	12.7	
Minimal Length of Split Plate	1000	
Maximal Length of Split Plate	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	~

Minimal Stud/Joist Length – defines the minimum length for stud/joist. If a length is less than the defined value, then the element will not be created.

Example: No studs were created because the length is less than 500:



Split the Siding Strip if Width is less than

(in Wall+, Wall+M) or

Split the Flooring Strip if Width is less than

(in Floor+, Floor+M) or

Split the Roofing Strip if Width is less than

(in Roof+, Roof+M)

Minimal Bridging Length	50	1	~
Minimal Stud/Joist Length	50		
Split the Siding Strip if Width is less than	80		
Minimal Siding Support Width for the Last Row	12.7	11.	
Minimal Length of Split Plate	1000		
Maximal Length of Split Plate	6000		
Maximal Length of Cover Plate/Joist	6000		
Offset Distance of Split	300		
			1

Split the Siding/Flooring/Roofing Strip if Width is less than – defines the rule when siding/flooring/roofing strip must be split or cut near the opening.

Example: Split the Siding/Flooring/Roofing Strip if Width is less than - 20:



Example: Split the Siding/Flooring/Roofing Strip if Width is less than - 80:



Minimal Siding Support Width for the Last Row (in Wall+, Wall+M) or

Minimal Flooring Support Width for the Last Row

(in Floor+, Floor+M)

Minimal Roofing Support Width for the Last Row

(in Roof+, Roof+M)

Minimal Bridging Length	50	^
Minimal Stud/Joist Length	50	
Split the Siding Strip if Width is less than	80	
Minimal Siding Support Width for the Last Row	12.7	
Minimal Length of Split Plate	1000	
Maximal Length of Split Plate	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	
	300	~

Minimal Siding/Flooring/Roofing Support Width for the Last Row – defines the rule when last siding/flooring row must be created or deleted.

Example: Minimal Siding/Flooring/Roofing Support Width for the Last Row = 0, so the last siding exists:



Example: **Minimal Siding/Flooring/Roofing Support Width for the Last Row** = 100, so the last siding was NOT created:



Minimal/Maximal Length of Split Plate (in Wall+, Wall+M) or

Minimal/Maximal Length of Split Rim/Joist

(in Floor+, Floor+M, Roof+, Roof+M)

Minimal Bridging Length	50	^
Minimal Stud/Joist Length	50	
Split the Siding Strip if Width is less than	80	
Minimal Siding Support Width for the Last Row	12.7	
Minimal Length of Split Plate	1000	
Maximal Length of Split Plate	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	~

Minimal/Maximal Length of Split Plate/Rim/Joist – predefines min/max length for splitting top/bottom plates. Wall+, Floor+ or Roof+ \rightarrow Align/Trim/Extend \rightarrow Split Elements \rightarrow Split Top/Bottom Plates Automatically splits elements according to this setting.

Example with wood:



Example with metal:



Maximal Length of Cover Plate/Joist

Minimal Bridging Length	50	^
Minimal Stud/Joist Length	50	
Split the Siding Strip if Width is less than	80	
Minimal Siding Support Width for the Last Row	12.7	
Minimal Length of Split Plate	1000	
Maximal Length of Split Plate	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	
		~

Maximal Length of Cover Plate/Joist - predefines maximal length for splitting cover plates\joists. Wall+,

Floor+ or **Roof+** \rightarrow **Align/Trim/Extend** \rightarrow **Split Elements** \rightarrow **Split Rim Joists Automatically** splits elements according to this setting.



Offset Distance of Split

Minimal Bridging Length	50
Minimal Stud/Joist Length	50
Split the Siding Strip if Width is less than	80
Minimal Siding Support Width for the Last Row	12.7
Minimal Length of Split Plate	1000
Maximal Length of Split Plate	6000
Maximal Length of Cover Plate/Joist	6000
Offset Distance of Split	300

Offset Distance of Split – defines splitting distance for the selected top/bottom plate from the selected stud. **Wall+**, **Floor+** or **Roof+** \rightarrow **Align/Trim/Extend** \rightarrow **Split Elements** \rightarrow **Split Top/Bottom Plate Manually** splits selected top/bottom plate by selected stud according to this setting.

Example: Bottom plate is split a distance of 300 from the stud:

FRAMING CONFIGURATION - Modify Configuration Settings : AGACAD



Special Split Rule

Minimal Rim Joist Length	500	^
Minimal Bridging Length	150	
Minimal Stud/Joist Length	150	
Split the Flooring Strip if Width is less than	20	
Minimal Flooring Support Width for the Last Row	12.7	
Minimal Length of Split Rim/Joist	0	
Maximal Length of Split Rim/Joist	6000	
Maximal Length of Cover Plate/Joist	6000	
Offset Distance of Split	300	
Special Split Rule		~

Special Split Rule – splits rim joists according to Maximal Length of Split Rim/Joist setting value. Floor+ \rightarrow Add Elements \rightarrow Split Elements \rightarrow Split Rim Joists Automatically splits elements according to this setting.

Example: Rim joist was split when Maximal Length of Split Rim/Joist = 1500:



Minimal Distance Between Axis of Plate and Blocking/Nogging

Minimal Distance Between Axis of Plate and Blocking/Nogging		^
Minimal Distance	50	
		\sim

Minimal Distance Between Axis of Plate and Blocking/Nogging – apply minimal between top/bottom plates and blocking/nogging. If distance is less that predefined near Minimal Distance then blocking/nogging will not be created.

Example, if **Minimal Distance** < 1000 then the selected blocking is created:



Example, if **Minimal Distance** > 1000 then the blocking is not created:



Write Left/Right parameter into Opening Framing Elements

white early highle parameter into opening training elements		
Right Side Rotate Type	Flip	~
Bottom Plate Rotate Type	None	¥
Miter Top/Bottom Plates		
Activate Non Mitering		
Rotate Top Plate for Interior Walls attached to Roof	\checkmark	
Rotate Top Plate for Exterior Walls attached to Roof		

Write Left/Right parameter into Opening Framing Elements – if ticked then changes Yes/No instance parameters Left and Right in opening framing.

Example with wood:



Left and Right parameters can be easily created in M_WF Stud.rfa or I_WF Stud.rfa families:

<u>Mandatory conditions:</u> Name - **Left** or **Right** Type of Parameter - **Yes/No Instance** 08/09/21, 09:25 FRAMING CONFIGURATION - Modify Configuration Settings : AGACAD R 🖻 🖯 🔞 • 🗠 • 🖨 • 🖨 🖆 • 🖍 🖉 • 🔶 📰 🗟 🖓 • = M_WF Stud.rfa - 3D View: {3D} Type a keyword or phrase ብ ይ 🏡 💄 i Create Insert Annotate View Manage Add-Ins T4R: Wood Framing Quantification Site Designer TOOLS 4 BIM Extensions Modify - × 🚶 Model Line 🔊 Model Text Pipe Connector L m? Blend Revolve Sweep Swept Void Blend Forms Cable Tray Connector Void 🖕 Control Electrical Reference Reference Set 🔞 Model Group 🔹 Connector Connector Conduit Connector Select -Properties Forms Model Control Connectors Datum Family Types Properties me: LMBR 45x150 🗸 🎦 🕅 Type r Q Searc parameters Parameter Properties Parameter Value Formula Lock ~ Parameter Type Family: Struct Mech anical \$ Family parameter Constraints Cut Ends by Slope ✓ = (Cannot appear in schedules or tags) Mode Properties Structural End S ope (default) 0.00° ✓ O Shared parameter Structural Fra (Can be shared by multiple projects and families, exported to ODBC, and appear in schedules and tags) Insert eft (default) Section Shap Insert Right (default) Material for N efault) Left (d Always expor Select... Export.. default) Right Identity Data Roof ope (default) 0.00° ✓ Parameter Data Code Name Rotated (default) 0.00° Name: OmniClass N ope (default) ~ Start S Left ОТуре OmniClass T Identi y Data Other Discipline: Assembly Code FM HostSortMark (defau Always vertic Instance Common Cut with Void FM Material_Dimension Reporting Parameter Type of parameter: Symbolic Rep FM Number of Connect 0.000000 FM Type of Connector (Can be used to extract value from a geometric condition and report it in a formula or as a schedulable parameter) Yes/No Shared Show family Group parameter under: FM b = if(b < d, b, d) Model Properties I TE +E **2↓** 2↑ Manage Lookup Tables Tooltip description: <No tooltip description. Edit this parameter to write a custom tooltip. Custom t... How do I manage family types? OK Cancel Apply Edit Tooltip... Properties help

Example with metal:



Left and Right parameters can be easily created in Stud families:

Mandatory conditions:

Type of Parameter - Yes/No Instance

R 🗉	🕞 🖥 🌀 • 🕾 • 🗟 •	• 🖨 🖶 • 🖉 •	🗛 🔂 • 🕈 🗾	C+C St	ud.rfa - 3D View: {3D} Type a
File	Create Insert Annotat	e View Manage	Add-Ins T4R: Wo	od Framing T4R: Metal Framing	Quantification Site Designer BIM Inte
N		ABB		Model Text	📙 🔊 🥽 🌳 Pipe
hs	Family Types			X	
Modi	runnij ijpes				Control Electrical Duct
Select	Type name: C10251-10			* * A *	Connector Connector
	Search parameters			Parameter Properties	×
Projec	Parameter	Value	E	- Parameter Type	
₽₽,	LB_Start (default)	200.000	= H_D - Sh_S		
	LB_End (default)	200.000	= H_D - Sh_E	Family parameter	
	H_D (default)	200.000	= Length / 1	(Cannot appear in schedules or ta	gs)
+ ·	Length (default)	200.000	=	◯ Shared parameter	
+ ·	Lengthen_End (default)	0.000	=	(Can be shared by multiple project	ts and families, exported to ODBC, and
	Lengthen_Start (default)	0.000	=	appear in schedules and tags)	
	Sh_End (default)	0.000	=		
	Sh_Start (default)	0.000	=		Select Export
	Mechanical			Parameter Data	
	CNC Type		=	Name:	
	Model Properties			Right	() Type
÷[0]	Cut Offset	25.400	= bf / 2 - 💓		
	Face Offset	25.400	= bf / Z + Sic	Discipline:	
	Side Offset	0.000		Common	 Instance
	d_True	102.000	= d	Type of parameter:	Reporting Parameter
	b_True	50.800	= bf	Yes/No	 (Can be used to extract value
	b	50.8000	= Face Offse	Group parameter under:	report it in a formula or as a
	Other			Other	schedulable parameter)
	Left (default)		=		
	Identity Data			Tooltip description:	
				<ivo description.="" edit="" parar<="" td="" this="" tooltip=""><td>meter to write a custom tooltip. Custom t</td></ivo>	meter to write a custom tooltip. Custom t
		<u> </u>		Edit Tooltip	
	🧷 눱 🛍 🕂 👯	â∔ ≩↑		How do I create family parameters?	
	How do I manage family types?		ОК		OK Cancel

Right Side Rotate Type

Write Left/Right parameter into Opening Framing Elements		^
Right Side Rotate Type	Flip v	
Bottom Plate Rotate Type	None	
	Rotate	
Miter Top/Bottom Plates	Flip	
Activate Non Mitering	Do Not Rotate	
Rotate Top Plate for Interior Walls attached to Roof	\checkmark	
Rotate Top Plate for Exterior Walls attached to Roof	\checkmark	~

Right Side Rotate Type - select if the studs in opening right side should be flipped, rotated or do not rotated.

Bottom Plate Rotate Type

Flip v	
None v	
None	
Flip	
\checkmark	
\checkmark	
	Flip ∨ None ∨ Flip ∨ ✓ ✓

Bottom Plate Rotate Type - select if the bottom plates should be flipped or not.

Miter Top/Bottom Plates

1	6				11
	Write Left/Right parameter into Opening Framing Elements			Ŷ	
	Right Side Rotate Type	Flip	¥		
	Bottom Plate Rotate Type	None	¥		
	Miter Top/Bottom Plates				
	Activate Non Mitering				
	Rotate Top Plate for Interior Walls attached to Roof	\checkmark			
	Rotate Top Plate for Exterior Walls attached to Roof	\checkmark			
Т					

Miter Top/Bottom Plates - miters top or bottom plates in the connection.

Rotate Top Plate for Interior/Exterior Walls attached to Roof

(in Wall+ and Wall+M)

Write Left/Right parameter into Opening Framing Elements		
Right Side Rotate Type	Flip ~	
Bottom Plate Rotate Type	None v	
Miter Top/Bottom Plates		
Activate Non Mitering		
Rotate Top Plate for Interior Walls attached to Roof	\checkmark	
Rotate Top Plate for Exterior Walls attached to Roof		

Rotate Top Plate for Interior/Exterior Walls attached to Roof - rotates top plate for interior/exterior walls which are attached to roof.





Ticked OFF:



Note: Pay attention if your walls are exterior or interior under wall type parameter Function:

8/09/21, 09:25		FRAM	IING CONFIGURAT	ION – Mo	dify Configuration	Settings : AGACAE)
Select T Properties	× y Join → W	₹ 🕆 Õ (O	- •	Тур	e Properties	×
Modify I Walls	,			Family:	System Family: Basic Wall	¥	Load
Properties	×			Type:	A_Separate Modules	*	Duplicate
							Dename
Basic Wall A_Separate	Modules			Type Parame	eters		Kenalle
)A/=II= (1)	C PG Edit Type				Parameter	Value	= ^
vvalis (1)				Constructi	on		*
Constraints	Note Controlling			Structure		Edit	
Location Line	waii Centeriine			Wrapping	at Inserts	Do not wrap	
Base Constraint				Wrapping	at Ends	None	
Base Offset				Width		380.0	
Base is Attached				Function		Exterior	
Base Extension Distance	0.0			Shop Draw	ing Configuration		
Top Constraint	Up to level: Level 1			Smart Asse	mbly Configuration		
Unconnected Height	2700.0			Smart Deta	il Configuration		
Top Offset	2700.0			Graphics			\$
Top is Attached	<u> </u>			Coarse Sca	le Fill Pattern	Solid fill	
Top Extension Distance	0.0			Coarse Sca	le Fill Color	RGB 192-192-192	
Room Bounding				Materials	and Finishes		*
Related to Mass				Structural	Matorial	1	
Construction	*			Structural			
Link to Connected Wall	<u> </u>			Analytical	Properties	ia ana	*
Framing Configuration				Heat I rans	ter Coefficient (U)	0.2882 W/(m*·K)	
Reverse Start/End Conn.	. 🖌			Thermal Re	esistance (R)	3.4/02 (m ⁺ ·K)/W	
Unique Frame in Identi	 Image: A start of the start of			Thermal m	1855	17.74 kJ/K	
Unique Frame	✓			Absorptan	ce	0.700000	•
Assembly Mass							
Element Mass				<< Previ	ew	OK Cancel	Apply
Assembly Created-Und							
Properties nelp	Apply	1 1 10 🖂 🖂	1 🚱 🗛 👼 👘 🖓 o 👘				

Allow Different Offsets for Horizontal and Sloped Top/Bottom Plates

Special Method of Offset Calculations	
Allow Different Offsets for Horizontal and Sloped Top/Bottom Plates	

Allow Different Offsets for Horizontal and Sloped Top/Bottom Plates – adds additional options near Wall/Floor/Roof Framing - Offsets, which allow controlling offsets for horizontal and sloped top/bottom plates separately.

Ticked OFF:

Common Settings	Vertical Stud Top Plate Bottom Plate Offsets Framing Top/End Offset -500]
Wall Framing	Framing Bottom/Base Offset 0	j
Opening Framing		
L Connection	✓	

Ticked ON:

FRAMING CONFIGURATION – Modify Configuration Settings : AGACAD

Common Settings	Vertical Stud Top Plate Bottom Plate	Offsets
	Framing Top/End Offset	-500
Wall Framing	Framing Sloped Top/End Offset	-200
	Framing Bottom/Base Offset	0
Opening Framing	Framing Sloped Bottom/Base Offset	
L Connection		