SHEATHING and PANELING LAYOUTS – Main Features

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Sheathing and Paneling Layouts



Metal Framing Roof+ automates the creation of sheathing and paneling layouts. Sheathing or paneling layouts can be generated and split by existing joists or other predefined rules.



	She	athing Sche	dule	
FM SortMark	Thickness	Area	Count	Framing Member Mass
E-B				
SH - 1	0.8*	0.09 SF	1	0.19 lbm
SH - 2	0.8*	1.50 SF	6	3.23 lbm
SH - 3	0.8*	9.22 SF	1	19.86 lbm
SH - 4	0.8*	9.31 SF	1	20.06 lbm
SH - 5	0.8*	10.50 SF	1	22.62 lbm
SH - 6	0.8*	46.33 SF	4	99.79 lbm
SH - 7	0.8*	13.08 SF	1	28.17 lbm
SH - 8	0.8*	96.00 SF	6	206.76 lbm
SH - 9	0.8*	16.69 SF	1	35.94 lbm
SH - 10	0.8*	18.46 SF	1	39.76 lbm
SH - 11	0.8*	19.98 SF	1	43.04 lbm

SH - 10	0.8-	18.46 51	1	39.76 lbm
SH - 11	0.8*	19.98 SF	1	43.04 lbm
SH - 12	0.8*	23.06 SF	1	49.67 lbm
SH - 13	0.8*	24.81 SF	1	53.44 lbm
SH - 14	0.8*	152.88 SF	6	329.26 lbm
SH - 15	0.8*	25.73 SF	1	55.41 lbm
SH - 16	0.8*	28.83 SF	1	62.09 lbm
SH - 17	0.8*	115.46 SF	4	248.67 lbm
SH - 18	0.8*	30.68 SF	1	66.08 lbm
SH - 19	0.8*	30.79 SF	1	66.31 lbm
SH - 20	0.8*	30.94 SF	1	66.64 lbm
SH - 21	0.8*	31.02 SF	1	66.82 lbm
SH - 22	0.8*	320.00 SF	10	689.20 lbm
52		1055.38 SF		2273.03 lbm

Before you start

Sheathing or paneling is created using Revit Parts.

In order to see the sheathing or paneling, you have to select **Show Parts** or **Show Both** in **View Properties** \rightarrow **Parts Visibility**.

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Properties	×
3D View	•
3D View: {3D}	V 🔓 Edit Type
Graphics	\$
View Scale	3/8" = 1'-0"
Scale Value 1:	32
Detail Level	Medium
Parts Visibility	Show Both
Visibility/Graphics Overrides	Show Parts
Graphic Display Options	Show Original
Discipline	Show Both

In the **Element Properties** you can find all information about every created sheathing/paneling segment. This information can later be used in tags and schedules.



Split Parts

Frame Roof Add/Modify Elements Modify Other Nodify Other Roof+M	Split Parts Split Parts Split Parts Split Parts Update Part Parameters P10 Number Parts Sheathing Configuration Paneling Configuration Paneling Configuration Split Part by Selection Split Part by Selection Part Assembly Menu Reset Parts predefined to Split
	Reset Parts predefined to Split Reset Parts not predefined to be Framed Reset All Parts Apply Extensions for Parts

Split Parts – splits sheathing or paneling into segments by predefined **Sheathing Configuration** or **Paneling Configuration**. You just need to select a roof or any frame of a roof.

Note: In order to see the sheathing, switch on **Show Parts** or **Show Both** under **Parts Visibility** in the **View Properties**.



Sheathing or Paneling will be split if selected roof layer has the conditions below in Link Roof:

- Framing Layer predefined as Sheathing, Sheathing II or Paneling.
- Sheathing/Paneling Configuration name selected. It saves all settings for the sheathing/paneling layouts.
- Split Parts is ticked.

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R Link Roof									-		
Basic Roof : Roof 300 - for Rafters	Family: E Type: E	Basic Roof Roof 300 - for Rafters									
Basic Roof : Roof 300 - Frame Panel	Total thickness: 4	450									
	Layers				E	TERIOR SIDE	-				
	Framing Layer	Framing Configuration	0	Configuration	Fram	e Frame Part	Split Parts	Split by	Sheathing/Paneling Configuration	E	xclude Parts
	Roofing	 M_Roof Paneling 	× 1	Fixed 🗸		✓	-		Panel	1	
	Batten	 M_Roof_Panel Battens 	× 1	Fixed Y		~			None V		-
	Secondary Frame	M_Roof_Panel Secondary Frame	~ I	Fixed Y		✓			Panel 🗸		-
	Sheathing	None	~	Fixed Y					Roof Frame - 1 Top & 1 Bottom Layer 👻		
	Frame	 M_Roof_Rafter Main Frame 	× 1	Fixed Y	 Image: A start of the start of	✓			Panel v		-
	Paneling	None	× 1	Fixed Y					Panel v		-
	<										>
	<u> </u>								Cancel		ОК

R Roof+M. Sheathing Config	_		×
Configuration: Roof Frame - 1 Top & 1 Bottc 🗸	Save Duplicate Rename Delete		
Sheathing Dimensions	Sheathing Dimensions		
	Vertical Sheathing Horizontal Sheathing Preview		
	Width 1200 Width 1200		
Sheathing Layout	Length 3000		
Mark Settings			
	FIEVIEW -		
Opening			-1
End Connection			
· · · · · · · · · · · · · · · · · · ·		Cana	
	UK UK	Cance	21

Split Parts – select if parts need to be split after using **Split Parts** function or should be split later. This is very useful if there are many layers in the roof, for example, two sheathing/paneling layers and you want to split only one.

R Link Roof										-	(<
Basic Roof : Roof 300 - for Rafters	Family: Type:	Basic Roof Roof 300 - for Rafte	ers										
Basic Roof : Roof 300 - Frame Panel	Total thickness: 450 Layers EXTERIOR SIDE												
	Framing Layer	Framing Config	guration	Config	uration	Frame	Frame Part	Split Parts	Split by	Sheathing/Paneling Configuration	Ex	xclude Par	ts
	Roofing	M_Roof Panelii	ng	 Fixed 	~	✓	~	✓		Panel			
	Batten	M_Roof_Panel	Battens	 Fixed 	Ŷ	✓	~			None ``		-	
	Secondary Frame	M_Roof_Panel	Secondary Frame	 Fixed 	*	✓	~			Panel		-	
	Sheathing	 None 		Fixed	Ŷ					Roof Frame - 1 Top & 1 Bottom Layer 🕚			
	Frame	M_Roof_Rafter	Main Frame	 Fixed 	*	✓	✓			Panel		✓	
	Paneling	 None 		 Fixed 	Ŷ					Panel	·	-	
	<												>
										Cancel		ОК	

Update Part Parameters

Frame Add/Modify Elements Delete Frame Modify Other •	Split Parts Split Parts Split Parts
	Update Part Parameters
	Uppin Number Parts
	Sheathing Configuration
	Paneling Configuration
	Modify Sheathing/Paneling
	Split Part by Selection
	Part Assembly Menu
	Reset Parts predefined to Split
	Reset Parts not predefined to be Framed
	Reset All Parts
	Apply Extensions for Parts

Update Part Parameters – updates part parameters from Sheathing/Paneling Configuration \rightarrow Mark Settings without needing to use Split Parts on the roof again. Also enters HostMemberSortMark parameter.

Number Parts

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08/09/21, 08:52	SHE	EATHING and PANELING L	AYOUTS – Main Features : AGACAD
			Paneling Configuration
			Split Part by Selection
			Part Assembly Menu
			Reset Parts predefined to Split
			Reset Parts not predefined to be Framed
			Reset All Parts
or:			Apply Extensions for Parts
Frame Roof Elements	Update Frame Delete Frame Modify Other •	Roof+M	Split Parts Parts Number Parts Number Elements Settings * Settings *

Number Parts – renumbers all sheathing/paneling elements (Parts) by predefined configuration in Numbering Setup → Part Numbering Configuration. Part numbering configurations come from <u>Sort Mark (http://www.aga-</u> <u>cad.com/products/tools4revit/sort-mark)</u>. 08/09/21, 08:52

			×				
Configuration: Default Configuration v Save Duplicate Rename Delete							
Floor Numbering Setup Part Numbering Setup Numbering Setup							
Sort Mark Parts							
Sort Mark Configuration							
Part Mark - by Host and Part Mark		v	v				
None		~					
None		Ŷ					
None		Ŷ					
None		Ŷ					

Example: All sheathing/paneling elements (Parts) are grouped by **Framing Member Mark**, uniquely numbered, and have **Framing Member Mark** value as a prefix. Result is written to the **Mark** instance parameter. <u>Sort Mark E-Help >></u>

50 8 ^	Properties	×
	R	-
Frank - (Trop)	Parts (1)	✓ 🚰 Edit Type
	Shape is modified	
	Identity Data	\$
	Image	
	Comments	
	Mark	
	Framing Member	Panel
	Framing Member Type	Panel
	Framing	Roof
	Framing Member Descrip	Panel
	FM SortMark	PNL - 10
	Framing Layer	Paneling 🗌
	Framing Member Mark	PNL
	FM HostMemberSortMark	Metal Rafter Frame - 10"_3
	Framing Member Mass	
	Framing Member Volume	67.661 CF
	Show Shape Handles	
	Original Category	Roofs
	Original Family	Basic Roof
	Original Type	Metal Rafter Frame - 10"
	Material By Original	
	Material	Metal Deck

Sheathing Configuration



Sheathing Configuration – allows you to configure and save settings for the sheathing layouts. These settings can be saved and linked with roof layer using **Link Roof**.

<u>Read more >> (https://agacad.freshdesk.com/support/solutions/articles/44001800261-sheathing-and-paneling-layouts-%E2%80%93-sheathing-configuration)</u>

Paneling Configuration



Paneling Configuration – allows you to configure and save settings for the paneling layouts. These settings can be saved and linked with roof layer using **Link Roof**.



<u>Read more >> (https://agacad.freshdesk.com/support/solutions/articles/44001800482-sheathing-and-paneling-layouts-%E2%80%93-paneling-configuration)</u>

Modify Sheathing/Paneling



Modify Sheathing/Paneling – changes selected roof layer sheathing/paneling configuration to the new one from the list.

\rightarrow	
R Modify Paneling	×
Please select Configuration:	
Panel	~
ОК	Cancel

Split Part by Selection

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Frame Add/Modify Elements	Image: Constraint of the second se	Insert Rafters	Split Parts Elements Assembly Elements	c Roof nfigs + tings +
			Split Parts	
			Update Part Parameters	
			P1 Number Parts	
			Sheathing Configuration	
			Paneling Configuration	
		·	P ∰ Modify Sheathing/Paneling	
			Split Part by Selection	
			Part Assembly Menu	
			Reset Parts predefined to Split	
			Reset Parts not predefined to be Framed	
			Reset All Parts	
		·	Apply Extensions for Parts	

Split Part by Selection – splits selected sheathing/paneling layout by predefined placement direction: From Start, From End, or From both Sides.



Part Assembly Menu

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Frame Roof Add/Modify Elements	Image: Construction of the sector of the
	Split Parts Split Parts Update Part Parameters P1 Number Parts Sheathing Configuration Paneling Configuration
	Part Assembly Menu Reset Parts predefined to Split Reset Parts not predefined to be Framed Reset All Parts Apply Extensions for Parts

Part Assembly Menu - features for creating assemblies from Parts and different part selection possibilities.

<u>Read more >> (https://agacad.freshdesk.com/support/solutions/articles/44001788736-shop-drawings-%E2%80%93-part-assembly-menu)</u>

Reset Parts predefined to Split

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Frame Roof Add/Modify Elements	Update Frame Delete Frame Modify Other •	Insert Rafters	Split Parts Elements Assembly Elements	k Roof nfigs * tings *
		Roof+M	Split Parts	
			Update Part Parameters	
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			Sheathing Configuration	
			Paneling Configuration	
			P → Modify Sheathing/Paneling	
			Split Part by Selection	
			Part Assembly Menu	
			Reset Parts predefined to Split	
			Reset Parts not predefined to be Framed	
			Reset All Parts	
			Apply Extensions for Parts	

Reset Parts predefined to Split – resets sheathing/paneling layout to a single part.



Reset Parts not predefined to be Framed

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Frame Roof Add/Modify Elements	Image: Constraint of the second se
	Split Parts Split Parts Split Parts Update Part Parameters Sheathing Configuration Paneling Configuration Paneling Configuration Split Part by Selection Part Assembly Menu Part Assembly Menu Reset Parts predefined to Split Reset Parts predefined to be Framed
	Reset All Parts

Reset Parts not predefined to be Framed – resets sheathing/paneling parts that were not predefined to be framed.

Reset All Parts

08/09/21, 08:52	SHE	EATHING and PANELING LA	AYOUTS – Main Features : AGACAD	
Frame Roof Add/Modify Elements	Update Frame Delete Frame Modify Other •	Insert Rafters	Split Parts Elements Create Elements Set	nk Roof onfigs * ttings *
		Roof+M	Split Parts	
			Update Part Parameters	
			P10 Number Parts	
			Sheathing Configuration	
			Paneling Configuration	
			P → Modify Sheathing/Paneling	
			Split Part by Selection	
			Part Assembly Menu	
			Reset Parts predefined to Split	
			Reset Parts not predefined to be Framed	
			Reset All Parts	
			Apply Extensions for Parts	

Reset All Parts - resets all sheathing/paneling layouts from selected roof.



Apply Extensions for Parts

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Frame Roof Elements	Image: Constraint of the state of the	Insert Rafters Tooof+M	t S Elements Assembly Elements S	ink Roof Configs + ettings +
			Split Parts	
			Update Part Parameters	
		↓ ^{P1} P10	Number Parts	
			Sheathing Configuration	
			Paneling Configuration	
			Modify Sheathing/Paneling	
			Split Part by Selection	
			Part Assembly Menu	
			Reset Parts predefined to Split	
			Reset Parts not predefined to be Framed	
			Reset All Parts	
		(EE	Apply Extensions for Parts	

Apply Extensions for Parts – applies extensions for sheathing/paneling parts and merges all part segments. Extension values come from Sheathing or Paneling Configuration.

