

## QUESTION

How do I taper a wall in Revit?

## ANSWER

Revit 2022 builds on the slanted wall feature from Revit 2021 making it easy to create tapered walls.



Prior to Revit 2022 if you needed a tapered wall you would need to build it as an in-place family. In Revit 2021 a new parameter was added to walls called "Cross-Section". There were 2 options. Vertical and Slanted. In Revit 2022 there is a 3<sup>rd</sup> option – Tapered.

Properties		×
Basic W Generic	/all : - 8"	+
Walls (1)	v 🛱 Edit T	ype
Constraints		^ ^
Location Line	Wall Centerline	
Base Constraint	Level 1	
Base Offset	0' 0"	
Base is Attached		
Base Extension Di	0' 0"	
Top Constraint	Unconnected	
Unconnected Hei	20' 0"	
Top Offset	0' 0"	
Top is Attached		
Top Extension Dis	0' 0"	
Room Bounding	$\checkmark$	
Related to Mass		
Cross-Section	Vertical 🗸	
Structural	Vertical	*
Structural	Slanted	
Enable Analytical	Tapered	
Structural Usage	Non-bearing	
Dimensions		*
Length	12' 0"	
Area	240.00 SF	
Volta	160.0	



Before you can use the tapered wall option you'll have edit the structure of the wall to allow a layer in the wall to have a "variable" thickness. This option did not exist in earlier versions.

am	ily:	Basic Wall					
Type:		Generic - 8"					
Fotal thickness:		0' 8" (Default)		Sample	Height:	20' 0"	
esi	stance (R):	0.0000 (h*ft2*	°F)/BT	U			
ner	mai Mass:	0.0000 BT 0/(1	(2·0F)				
Lay	rs	Đ	TERIO	R SID	E		
	Function	Material	Thic	mess	Wraps	Structura Material	Variable
1	Core Bound	Layers Abo	0. 0.				
2	Structure [1]	<by categ<="" td=""><td>0' 8"</td><td></td><td></td><td><math>\checkmark</math></td><td></td></by>	0' 8"			$\checkmark$	
3	Core Bound	Layers Belo	0. 0.	•			
L		IN	ITERIO	r side			
	Insert	Delete			Up		Down
Det	fault Wrapping						
At	Inserts:			At E	nds:		
Do	o not wrap		$\sim$	Non	в		$\sim$
Мо	dify Vertical Str	ucture (Section	Previe	w only	)		
Modify		Merge Regions			Sweeps		
	Assign Layers	S	plit Reg	jion		Rev	eals
			,		Cance		Hala

After changing the wall to tapered you can adjust the angles of each face of the wall and control where the width of the wall is measured. (top of wall, bottom of wall, or base is at level line that wall is inserted on.)

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Width	0' 8"	
Function	Exterior	
Cross Section Properties		Ŷ
Default Exterior Angle	1.00°	
Default Interior Angle	1.00°	
Width Measured At	Base	$\sim$
Graphics	Тор	*
Coarse Scale Fill Pattern	Base	
Coarse Scale Fill Color	Bottom	
Materials and Finishes		*
Structural Material	<by category=""></by>	

## Notes

- You can use positive or negative numbers for angle.
- These parameters are "type based", but can be overridden by clicking "Override Type Properties" which enables you to revise the angles.
- The system won't let you adjust the values so the result would make the wall taper to a point. You need to have a flat section at the bottom or top.
- You can dimension slanted and tapered walls their cut plane or lower edges, and if you change the cut plane of the view the dimension will update.
- If the wall type is multi component, only one component can be set to variable.
- If you try to swap a tapered wall to another type, only wall types that have variable components will be listed.
- Windows and doors have options to allow you to align them to either face of the wall.