

Ottawa PC Users' Group

Q&A Session



Sweet Home 3D

Presentation 4

Why Wall Accuracy Matters!

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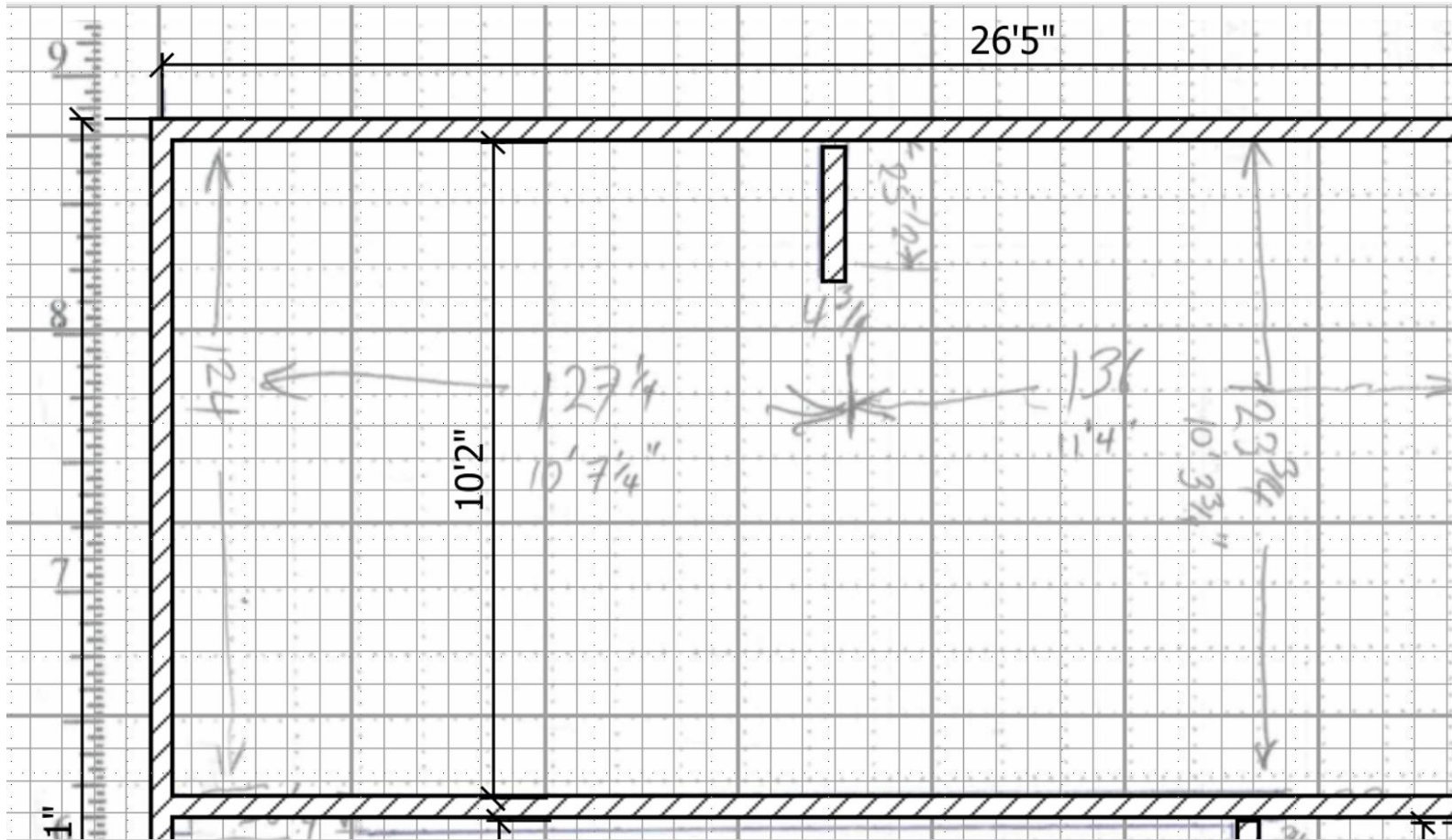


Hand-drawn floor plan of a rectangular building with a central corridor and two rooms. The plan includes dimensions for overall size, room size, and corridor width. The top room is 12'7 1/4" wide and 10'2" deep. The bottom room is 12'11 1/2" wide and 8'11" deep. The corridor is 5' wide. The overall width is 26'5" and the overall depth is 22'11". The plan also shows a door in the top room and a window in the bottom room.



The Sketch vs SH3D

For example, the width of this room was measured at 124 inches.



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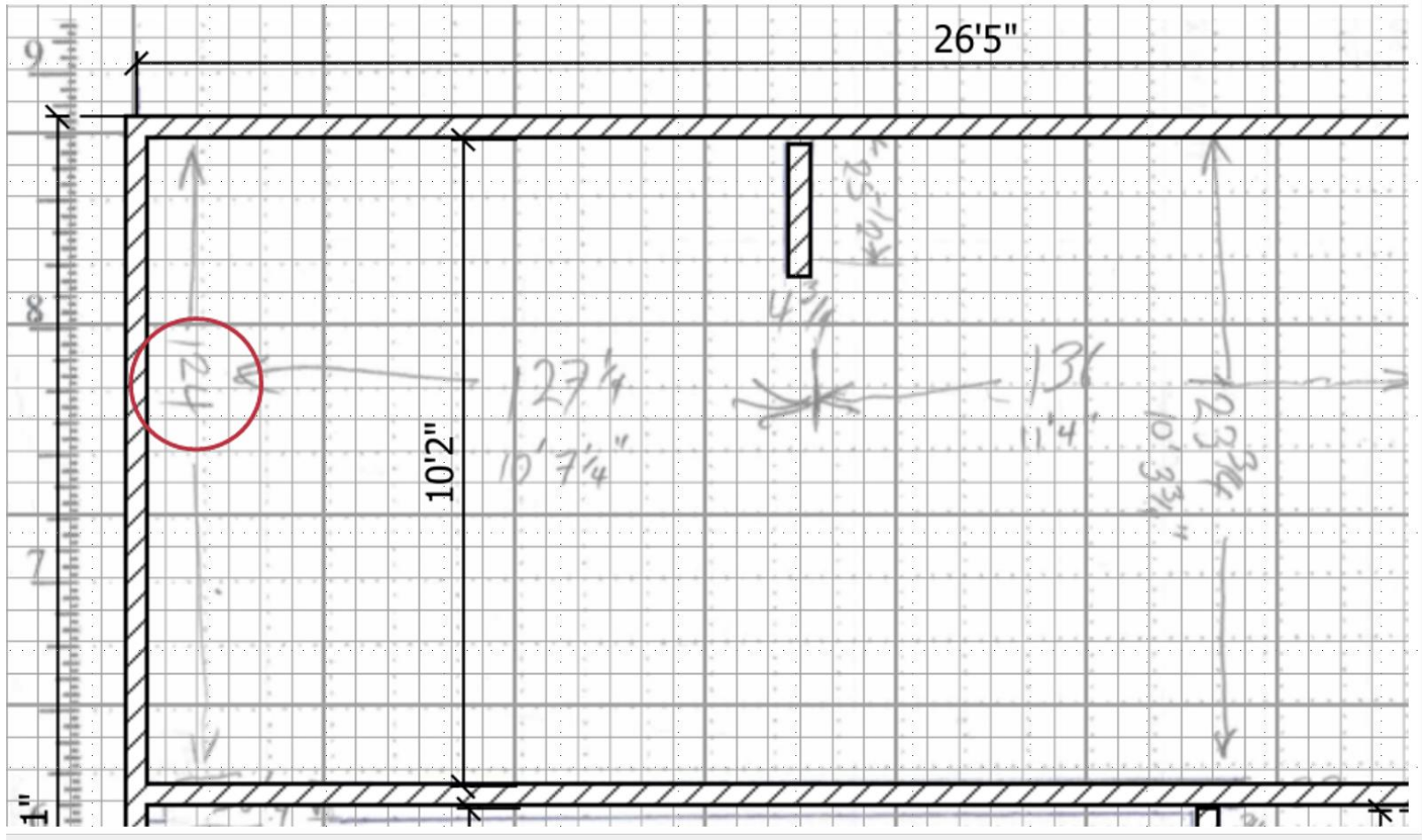


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The Sketch vs SH3D

124
inches
is 10
ft. 4
in.



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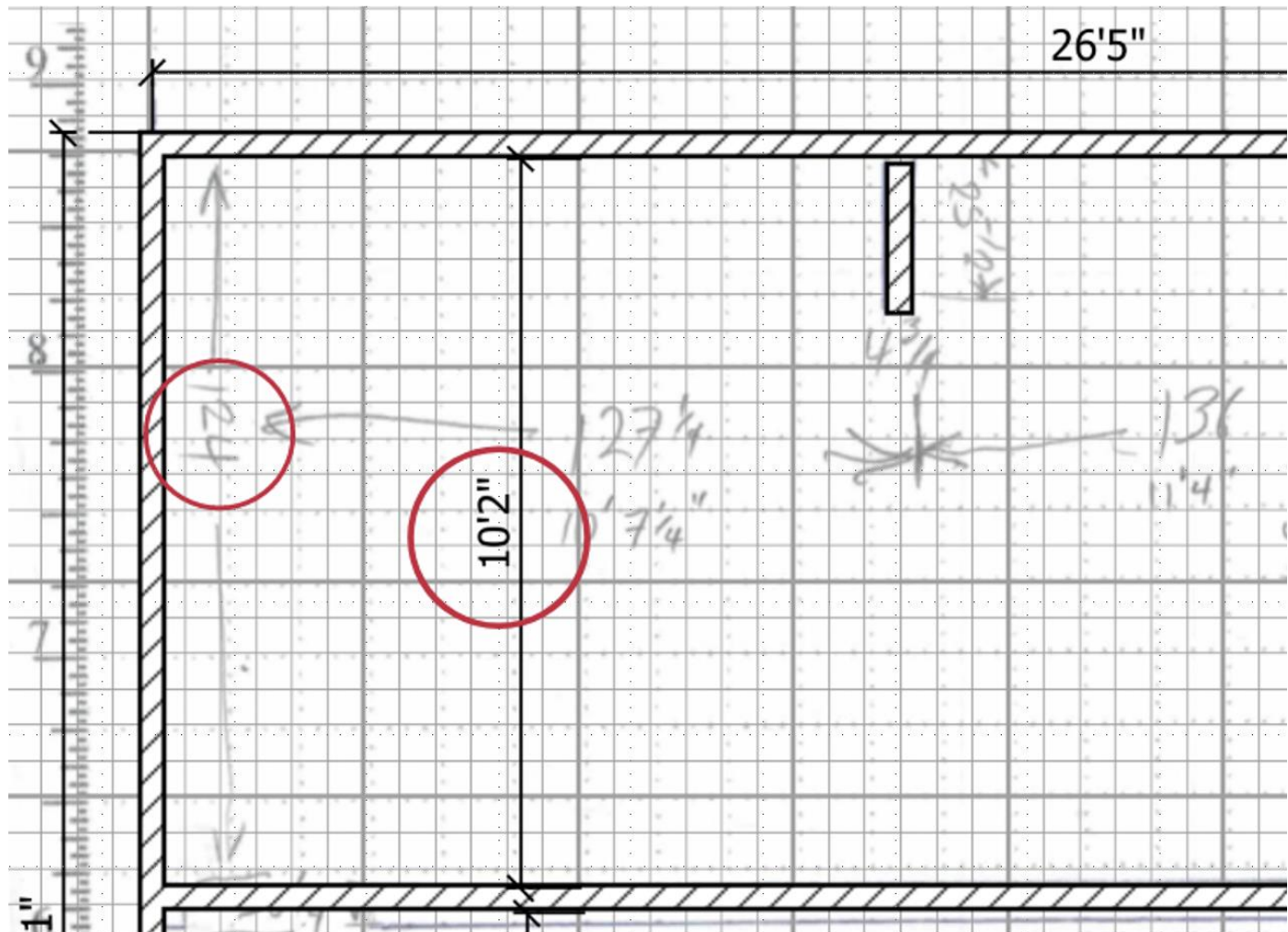
The Sketch vs SH3D, Why?

The SH3D measurement is 10 ft. 2 in.

Several reasons
- drawing was done quickly with little attention to accuracy

- no account taken of wall thickness. SH3D measures to the centre of the wall when drawing, whereas my measurements were inside surface to inside surface

- others?



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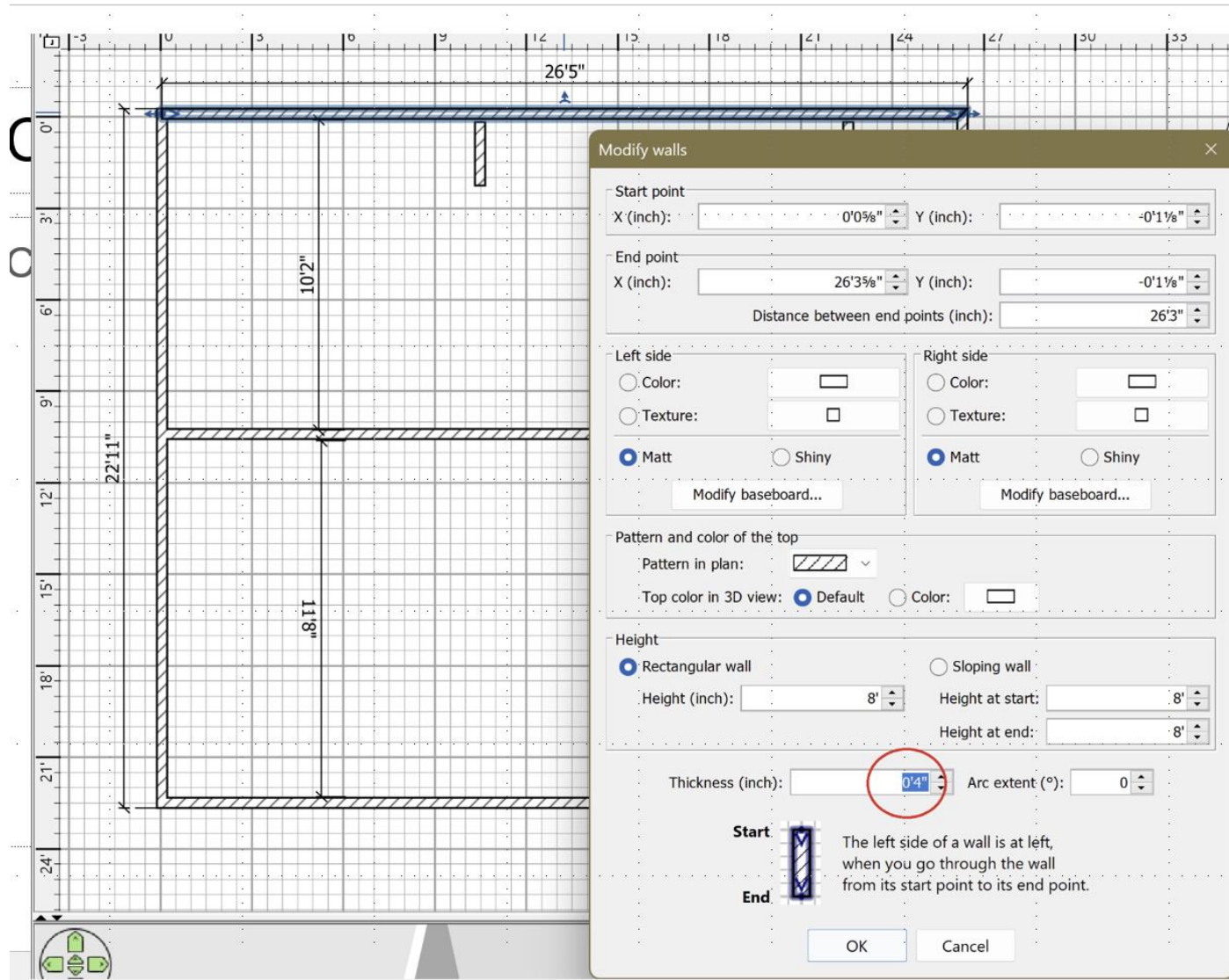
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It's the wall width, of course

We can make corrections after the fact to improve accuracy.

Double click a wall to bring up a properties dialog. We can change the thickness.



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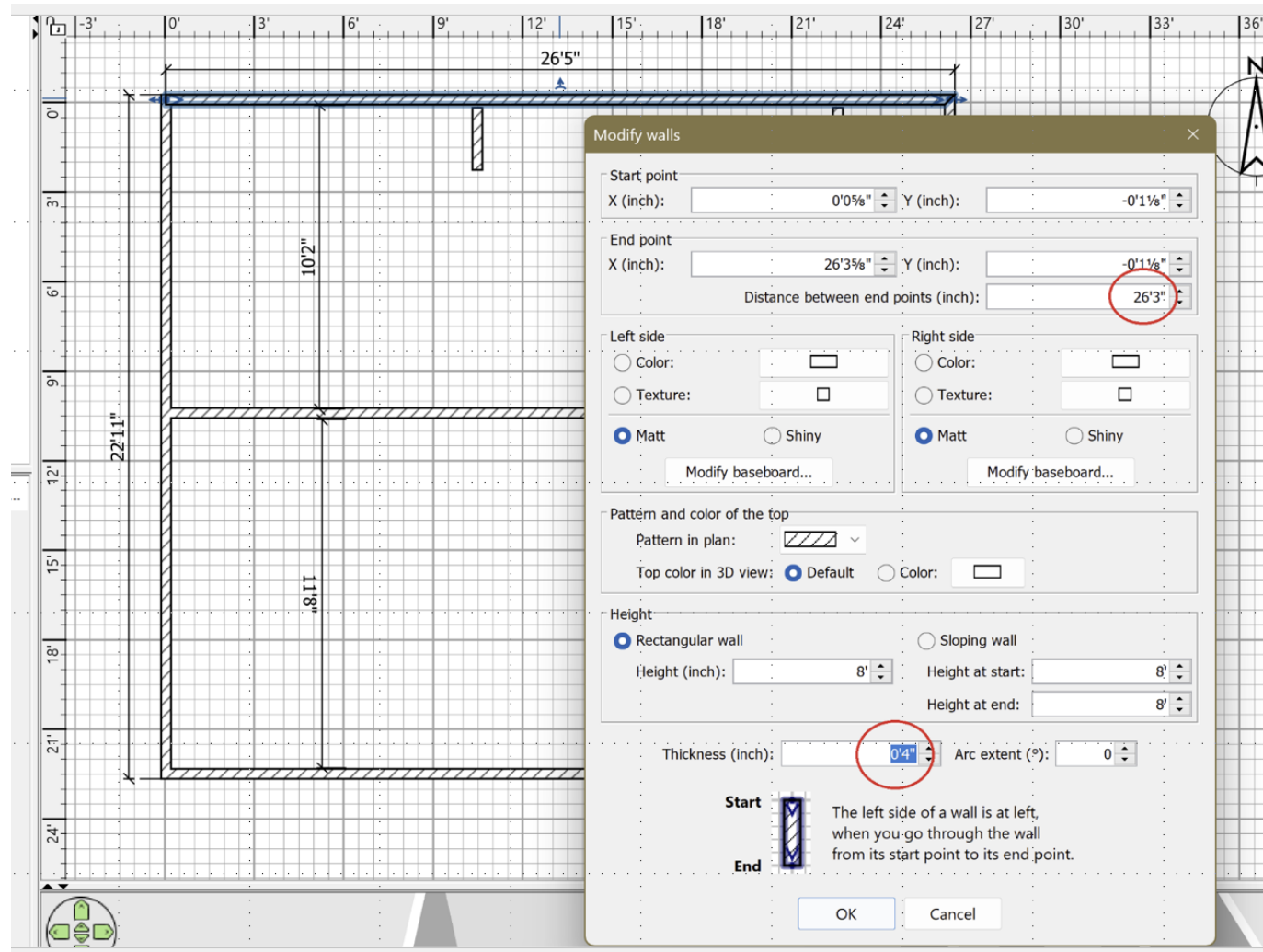
It's the wall width, of course

We can also change the length.

Early 1960s house, wall construction is 2 x 4 studs.

Allow for 1/2" drywall inside and guess at 1/2" plywood or equivalent outside under aluminum siding = 4 3/4".

Set length to 26' 6".



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It's the wall width, of course

So we make the same corrections for the right-hand wall.

And after that for the remaining two walls.

Modify walls

Start point
X (inch): 26'6 $\frac{5}{8}$ " Y (inch): -0'1 $\frac{1}{8}$ "

End point
X (inch): 26'3 $\frac{5}{8}$ " Y (inch): 22'7 $\frac{7}{8}$ "
Distance between end points (inch): 22'9"

Left side
☐ Color:
☐ Texture:
☒ Matt ☐ Shiny
Modify baseboard...

Right side
☐ Color:
☐ Texture:
☒ Matt ☐ Shiny
Modify baseboard...

Pattern and color of the top
Pattern in plan:
Top color in 3D view: ☒ Default ☐ Color:

Height
☒ Rectangular wall
Height (inch): 8'
☐ Sloping wall
Height at start: 8'
Height at end: 8'

Thickness (inch): 0'4 $\frac{3}{4}$ " Arc extent (°): 0

Start The left side of a wall is at left, when you go through the wall from its start point to its end point.

End

OK Cancel

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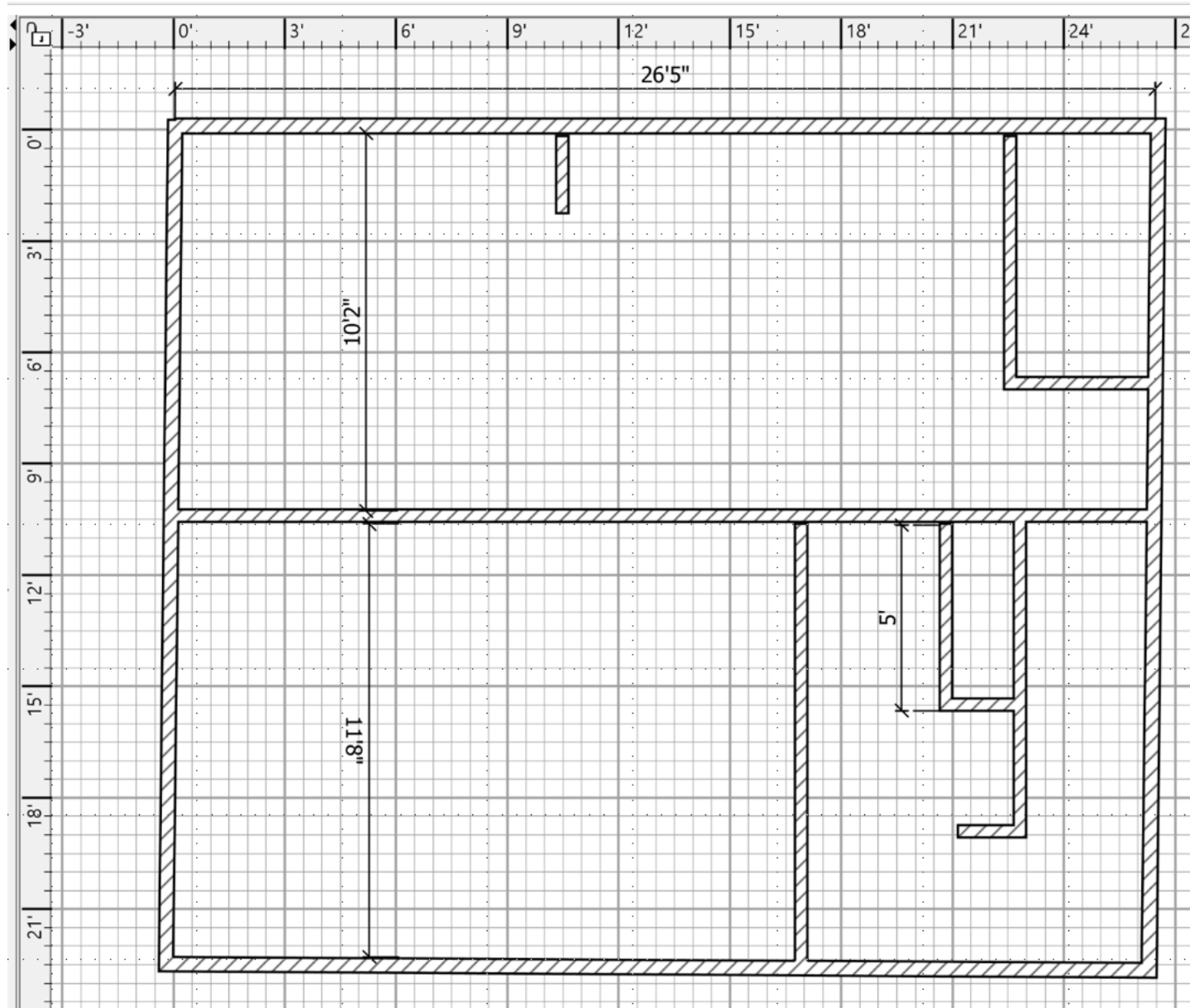


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And of course

But now our
rectangle is
out of square.
What about
interior
dimensions?



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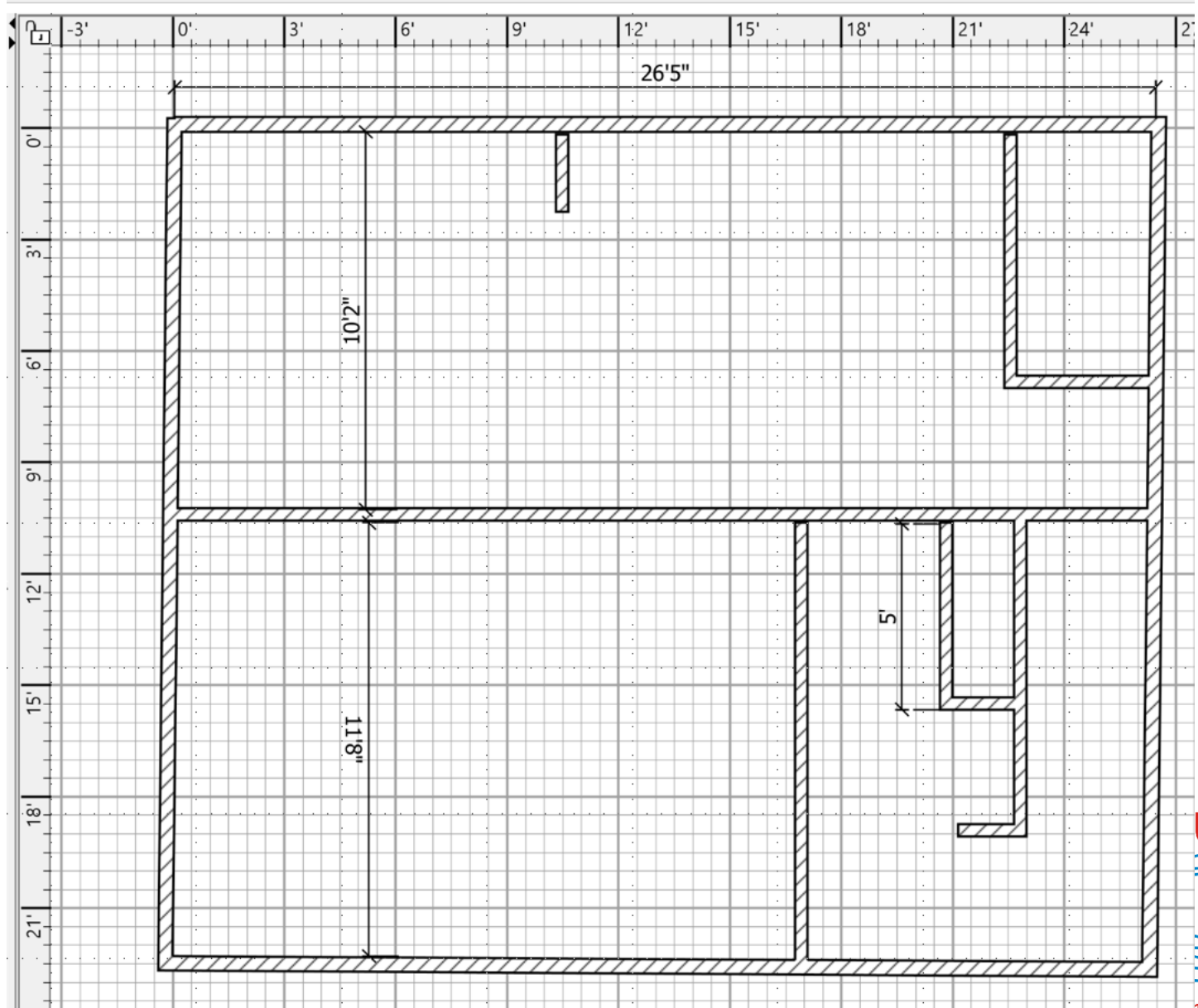
Getting to an answer

We get 22'6" which is still not right as we still have not accounted for wall thickness.

Remember length, in SH3D, is measured from the middle of the adjoining wall to the middle of the next.

So we have to add the width of the wall to the length so as to get the correct interior dimension.

The rectangle is skewed because the extra length is added to the training end of the wall. (We drew it in a clockwise direction)

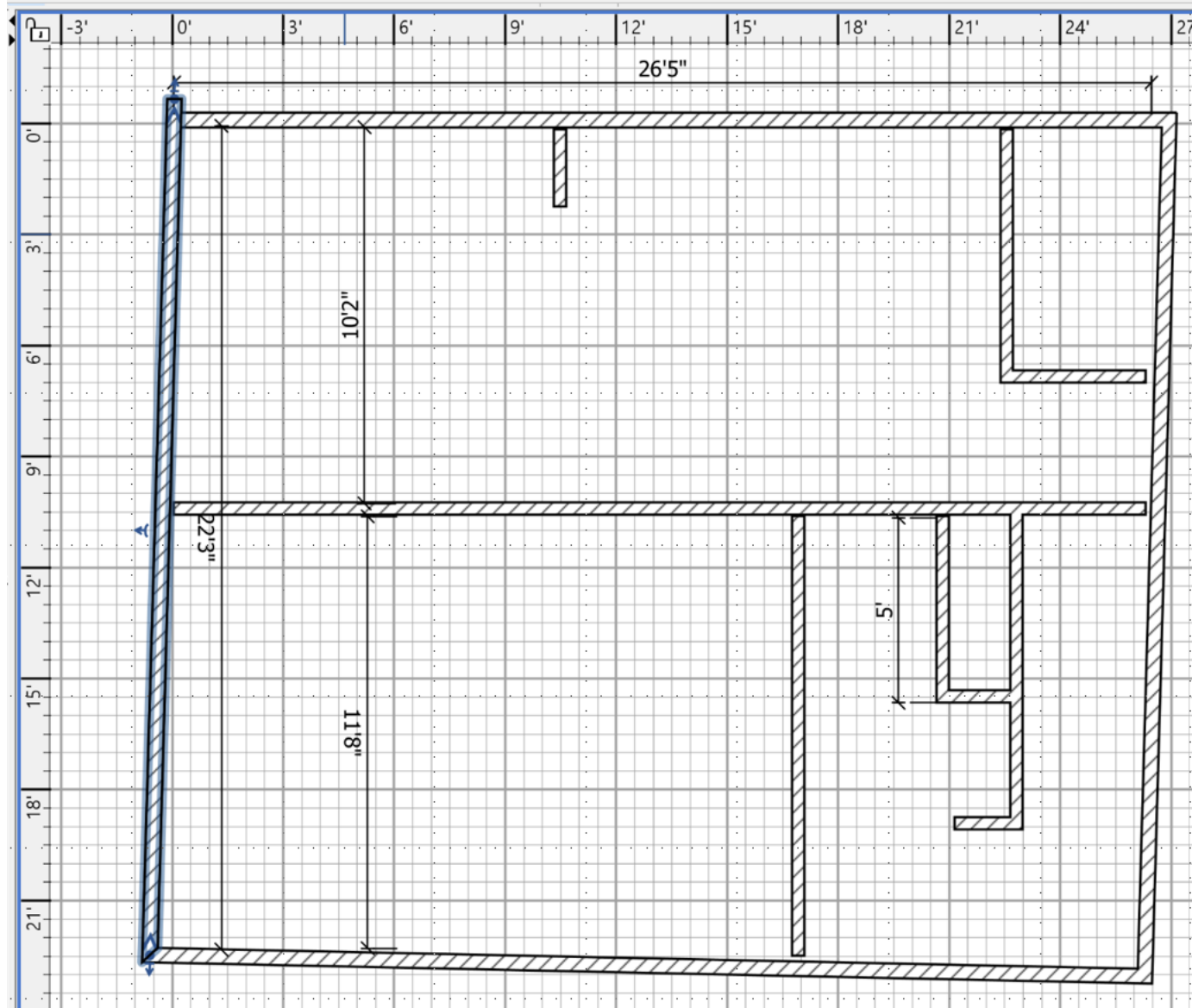




But?

After making a further correction by adding the wall thickness to the length, the skewing becomes more pronounced.

And note that the walls no longer connect in the upper left corner!



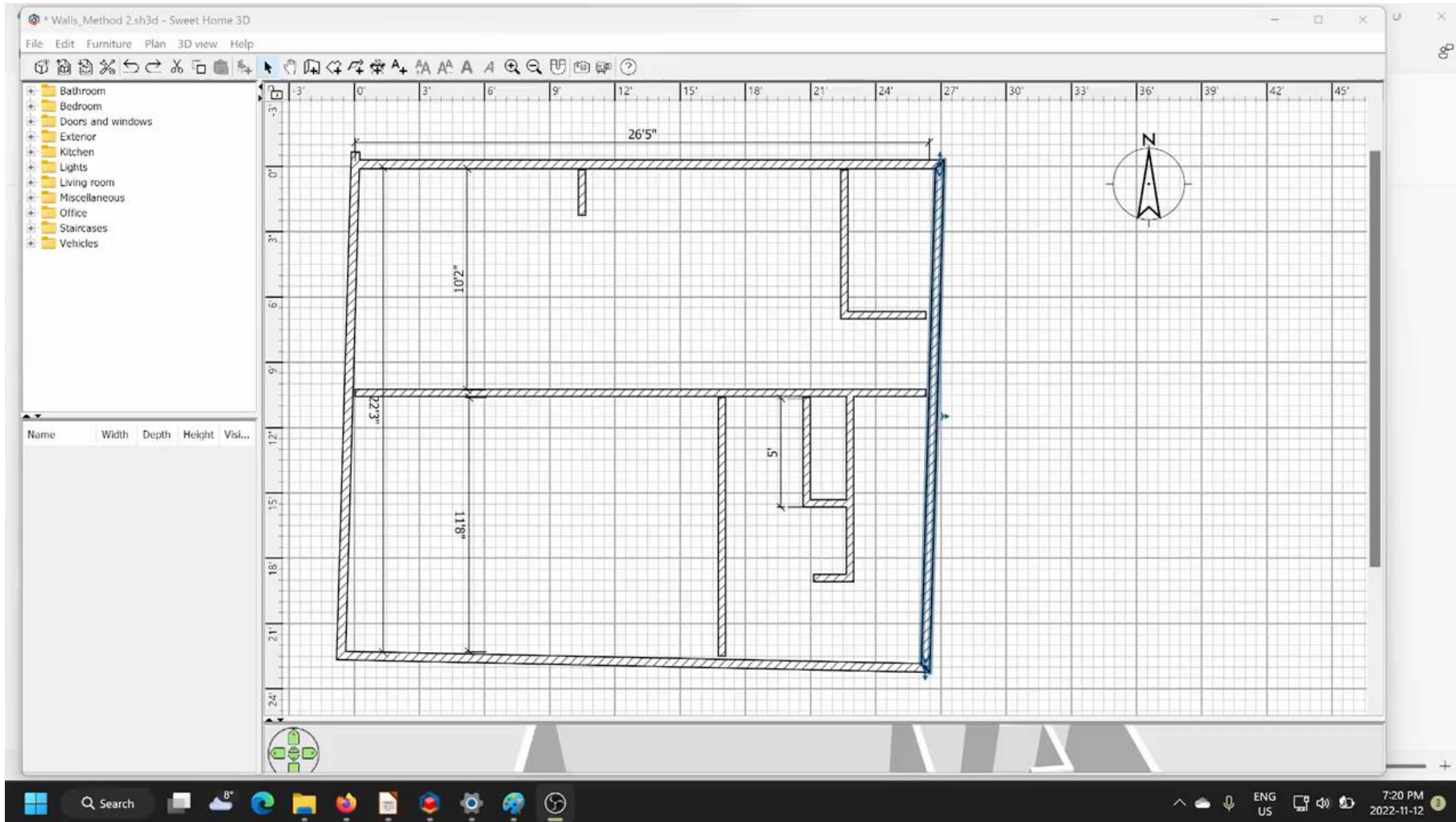
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Here's how we'll fix it.



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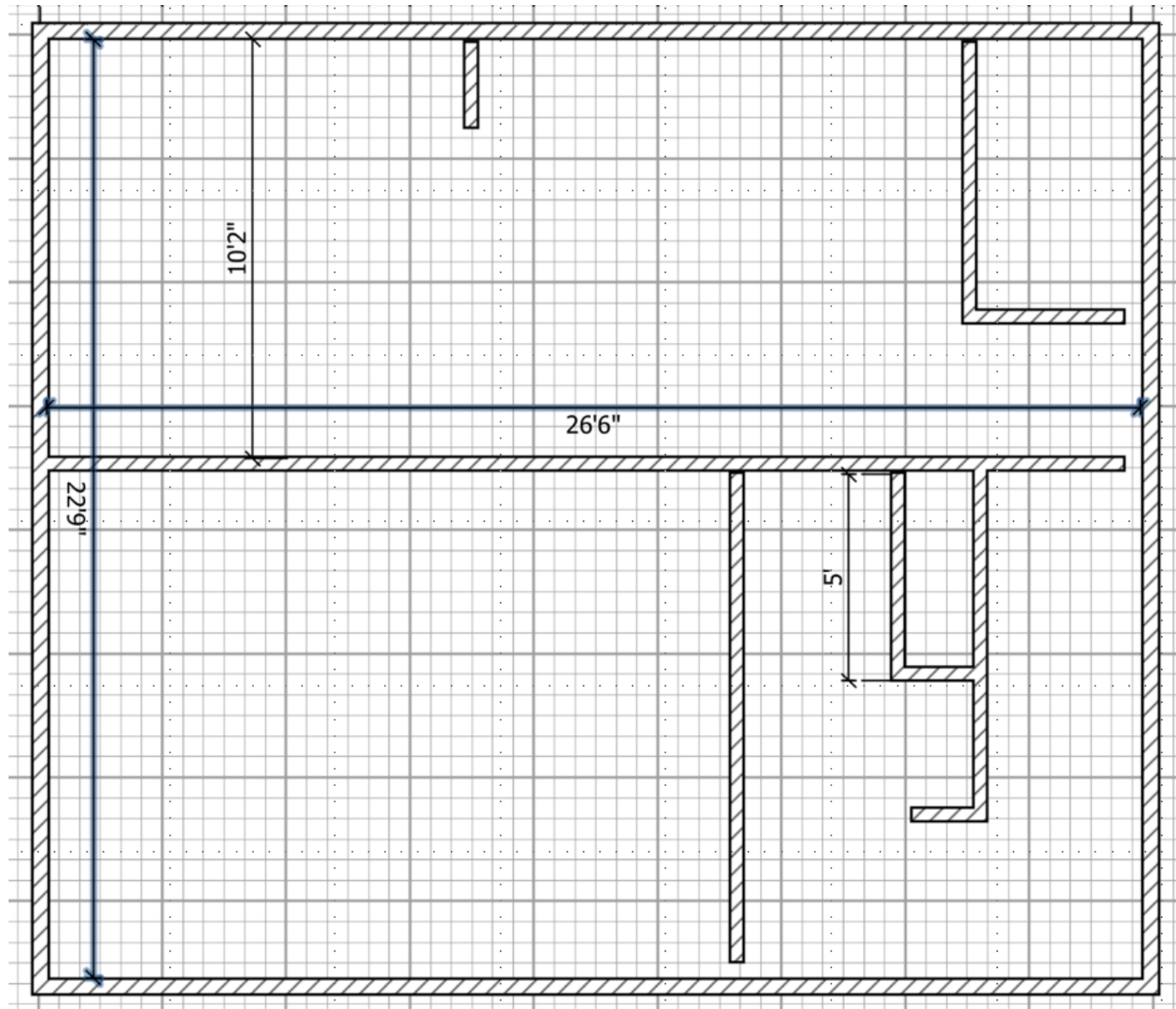


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Fixing the Interior walls.



Interested; email Lawrence@opcug.ca

A hand-drawn diagram of a trapezoid. A vertical line segment is drawn inside the trapezoid, representing the height. This segment is labeled with the letter 'a' at its bottom end.

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