
Double Bell Heater

Designed by Igor Kuznetsov and Alex Chernov

Built at 2008 Wildacres Workshop

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Material List

Core:

1. Firebrick 2.5x4.5 x9 - 600pc
2. Firebrick tile 12x24x2.5 3 to 6pc
3. Refractory mortar 55lbs (25kg) pails - 3pails

Facing:

1. Clay brick (8x3.5x2.25) - 850pc
2. Mortar mix according to quantity of brick
3. 24 iron angle 3.5x3.5 1pc
4. 36 iron angle 3.5x3.5 1pc
5. Pieces of 3x4 aluminum or galvanized steel flashing 8ft
6. Stone for capping the firebox shelf
7. Optional stone for capping heater top, or
8. 1 bag of coarse vermiculite and bag of Portland cement for sealing mix.
9. Strips of mineral or ceramic wool.
10. 100 sq ft of mineral wool or cardboard for expansion joint

Hardware:

1. Cast-iron firebox door 1pc
2. Ash-box door of some sort 1pc
3. Clean-out doors of some sort 3pc
4. Grate 2.25x 15
5. Shut-off chimney damper 1pc
6. Ceramic or mineral wool for door gaskets

3-D Views and Sections

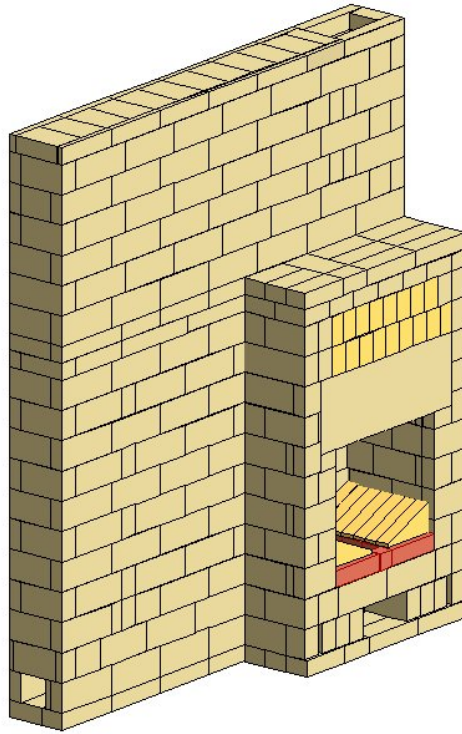


Figure 1 – full view, front

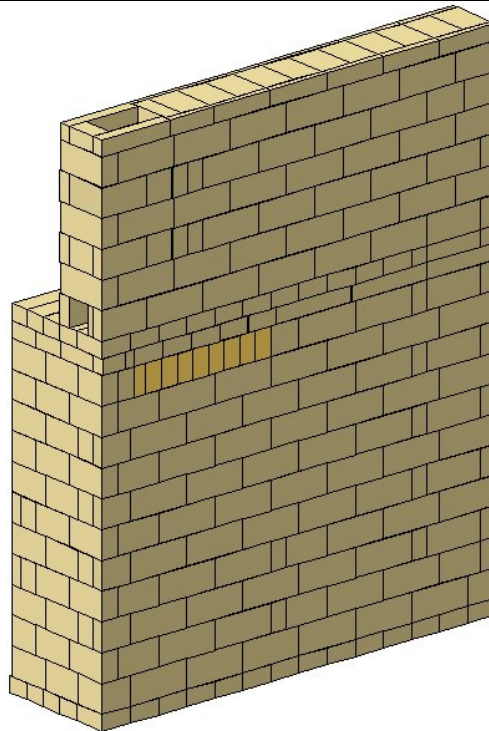


Figure 2 – full view, back

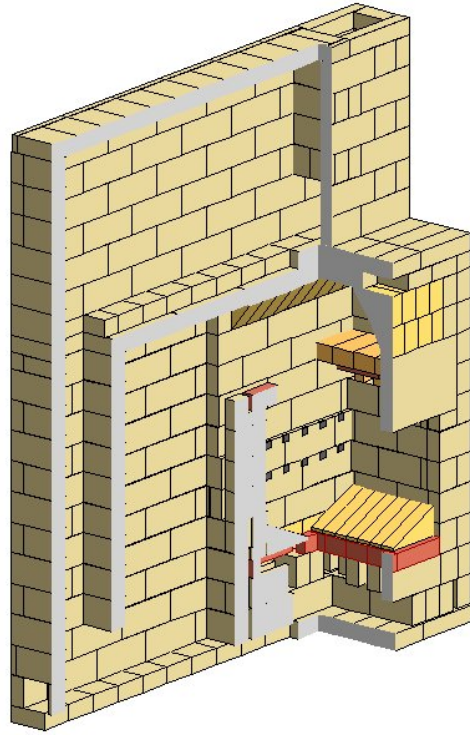


Figure 3 – front section

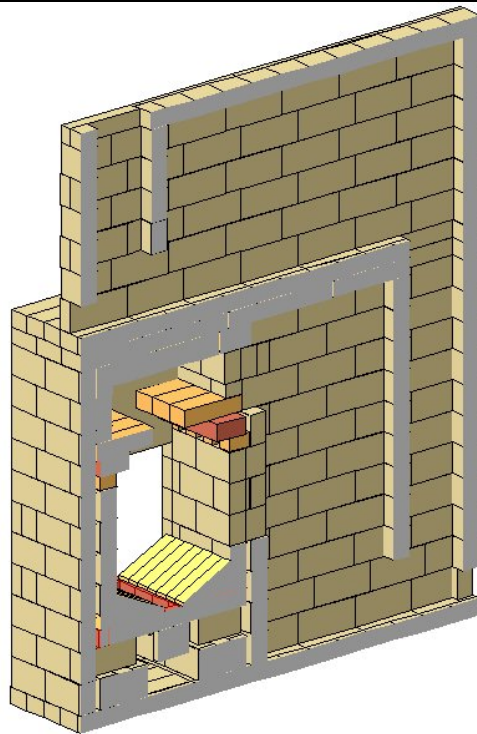


Figure 4 – rear section

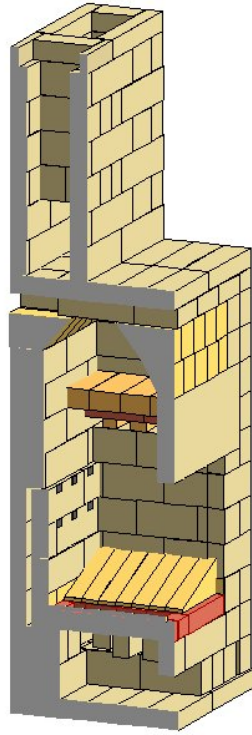


Figure 5 – left section

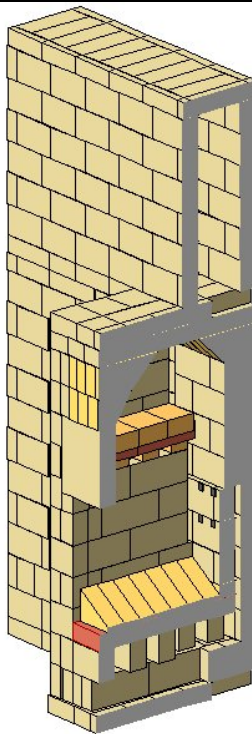


Figure 6 – right section

3-D Assembly Sequence

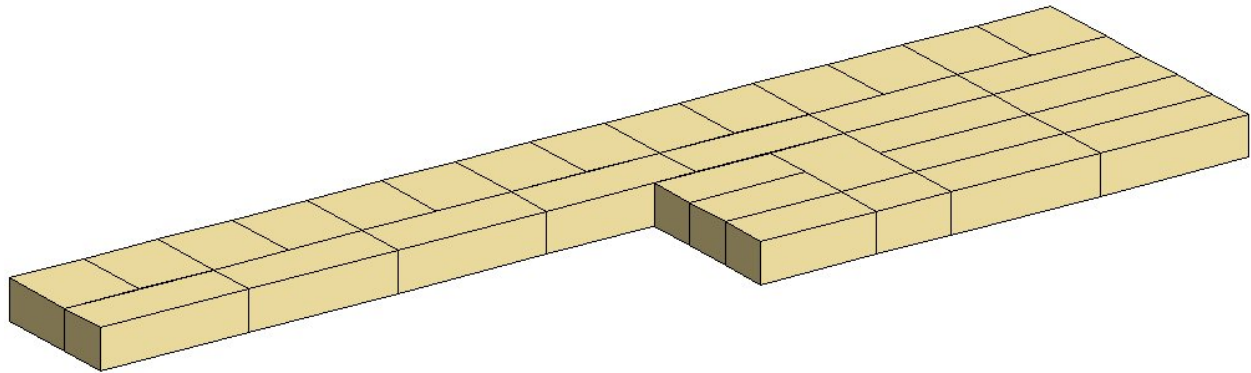


Figure 7 – course 1

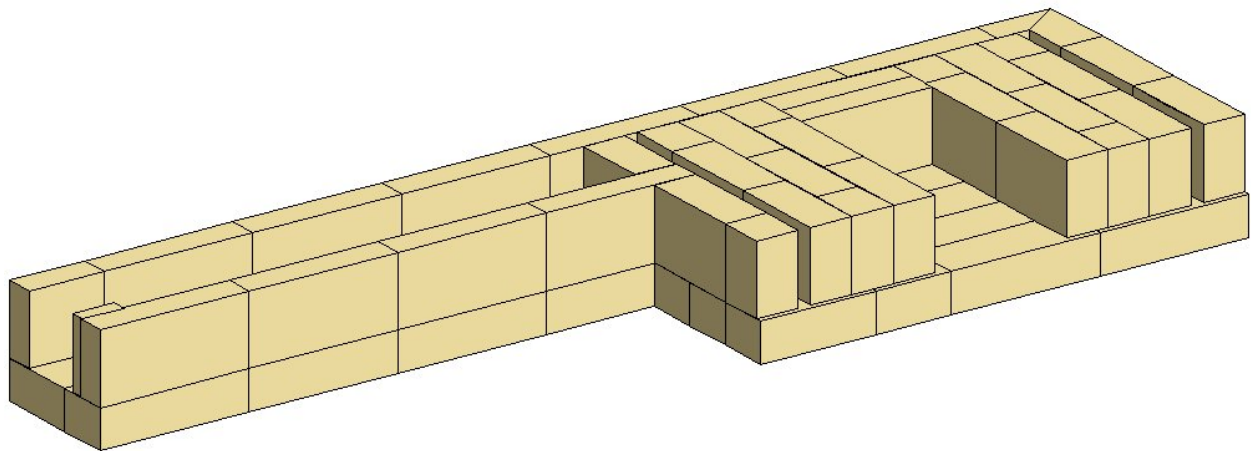


Figure 8 – course 2

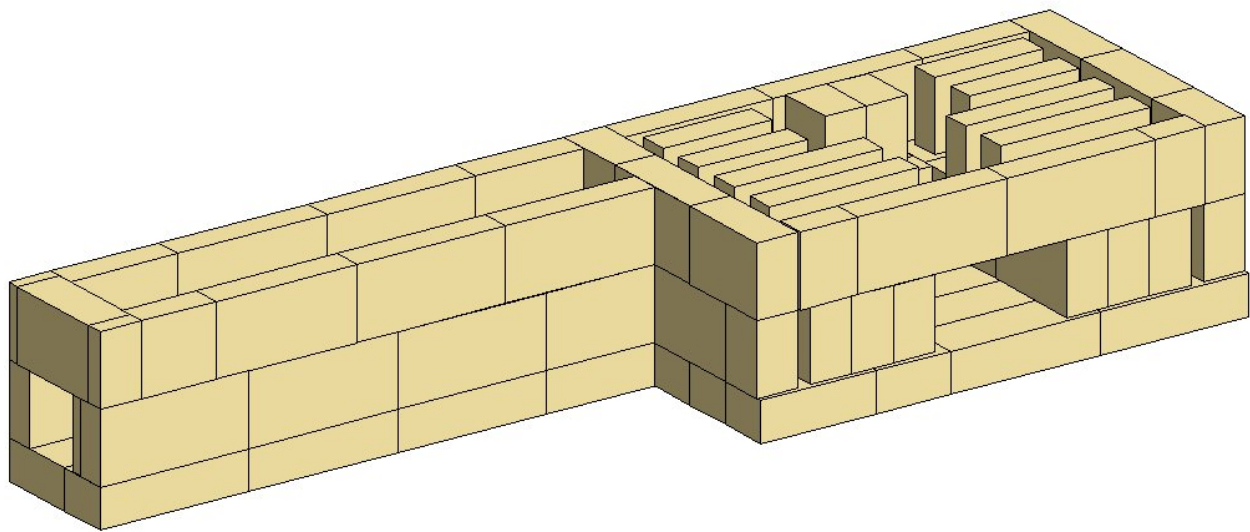


Figure 9 - course 3

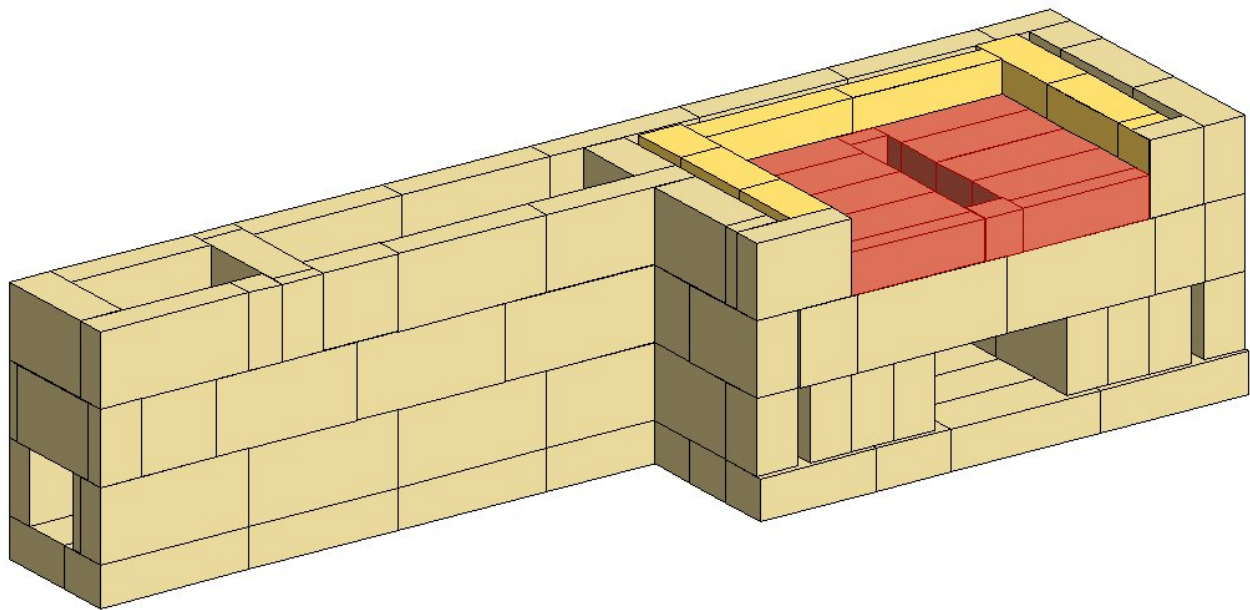


Figure 10 – course 4

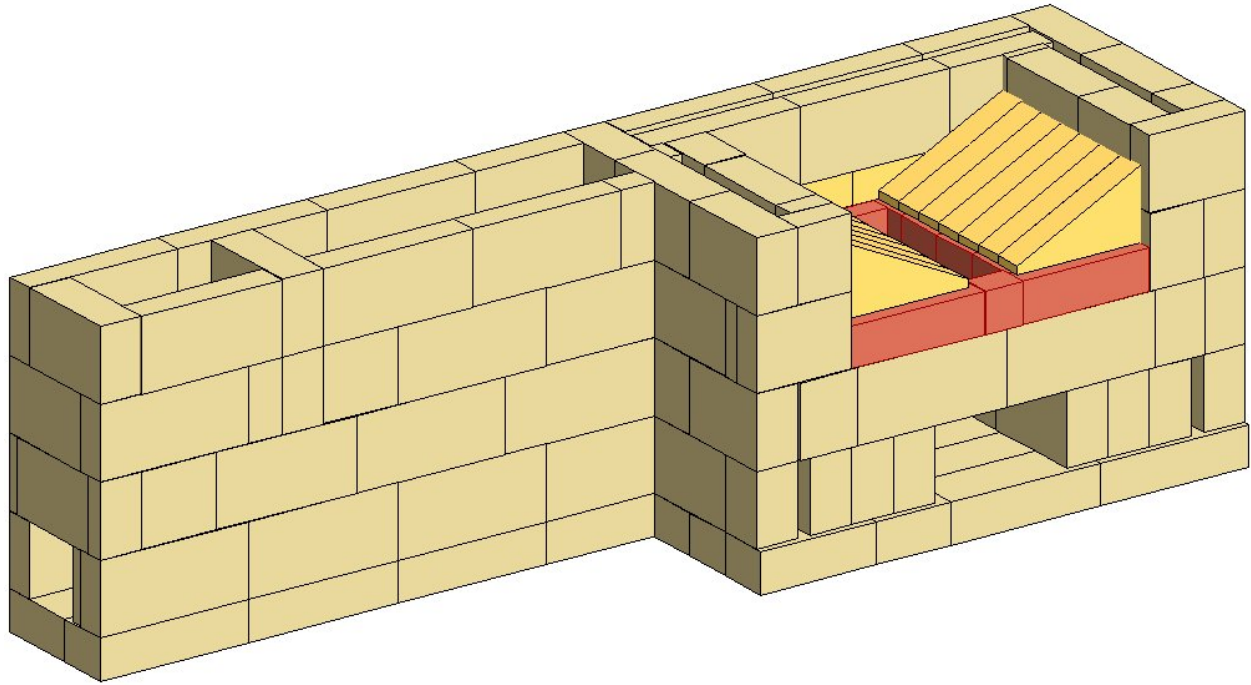


Figure 11 – course 5

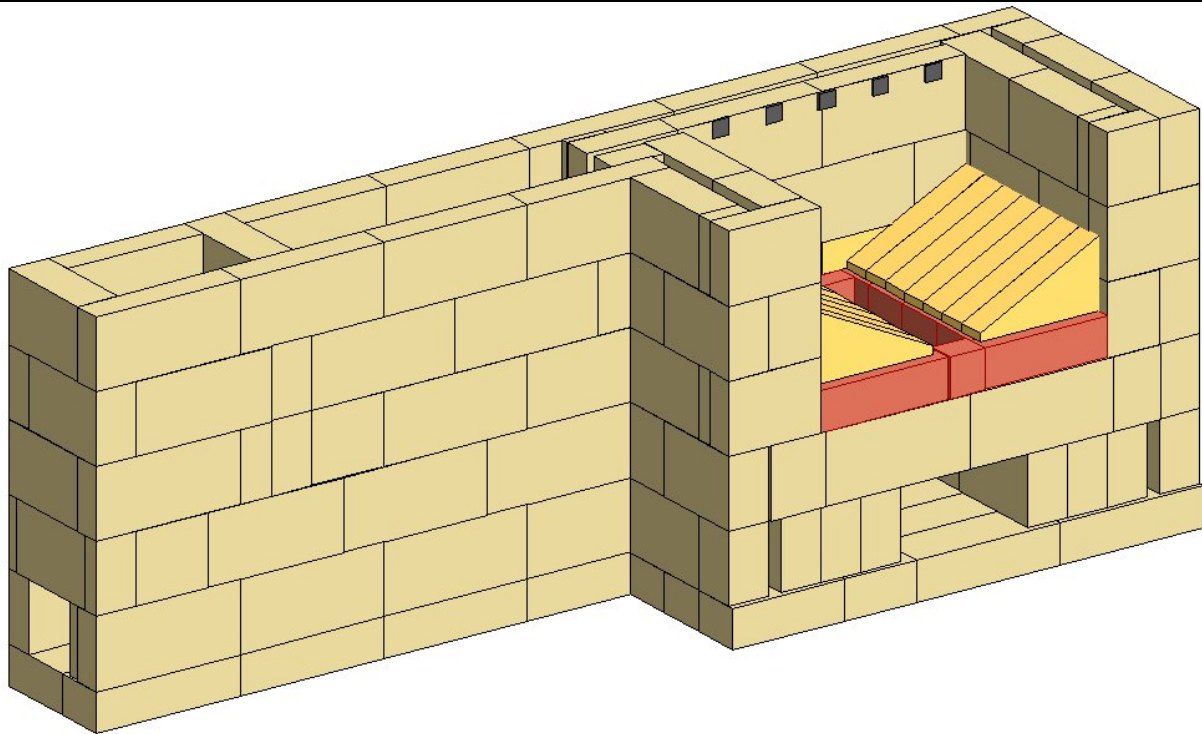


Figure 12 – course 6

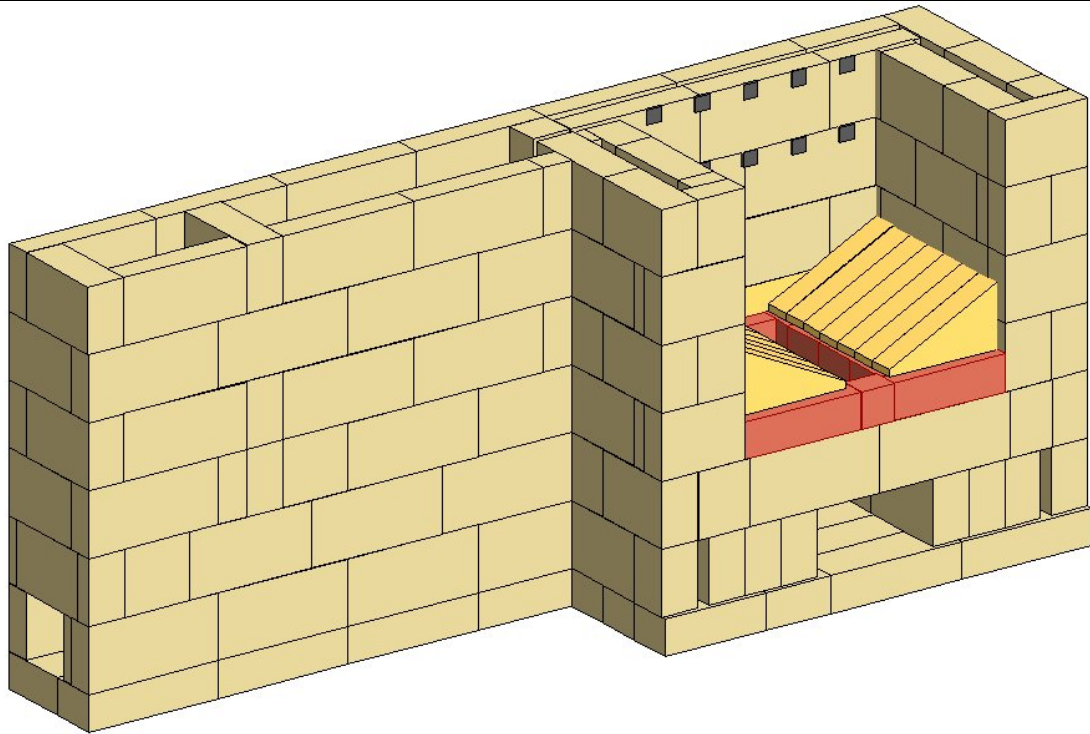


Figure 13 – course 7

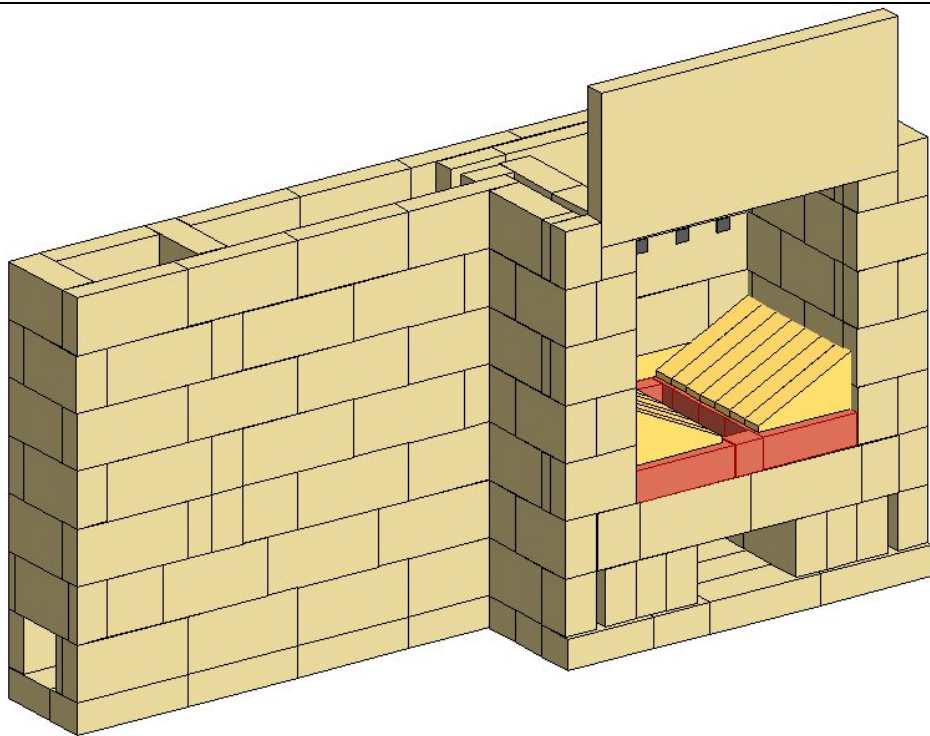


Figure 14 – course 8

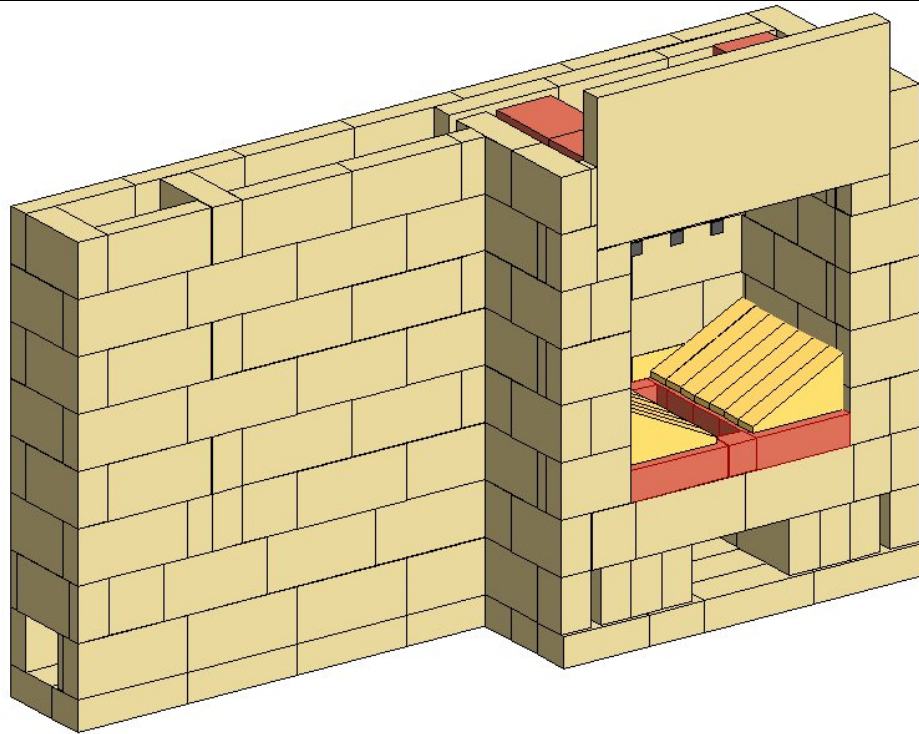


Figure 15 – course 9

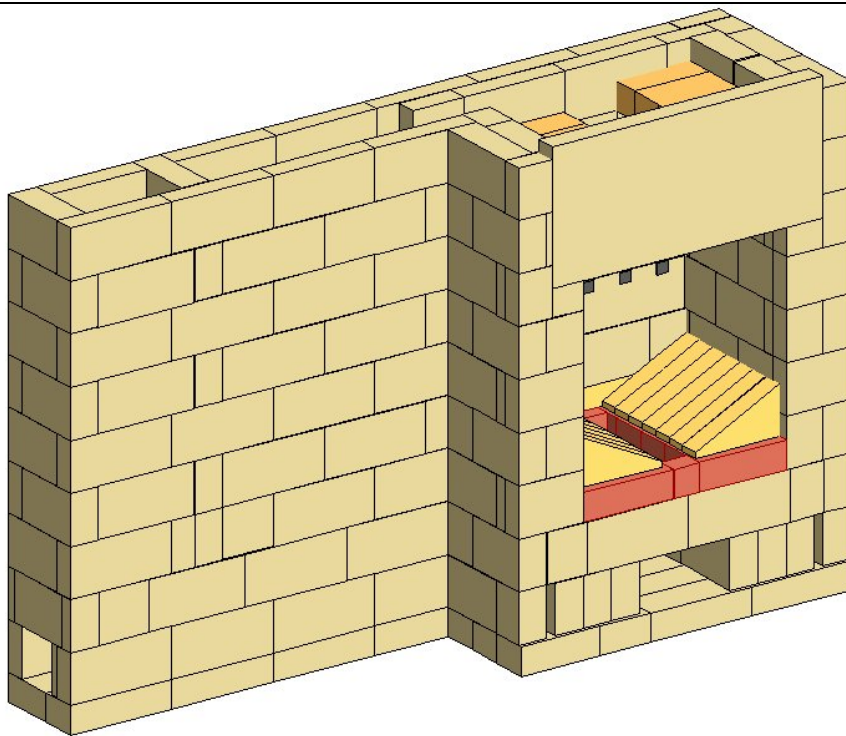


Figure 16 – course 10

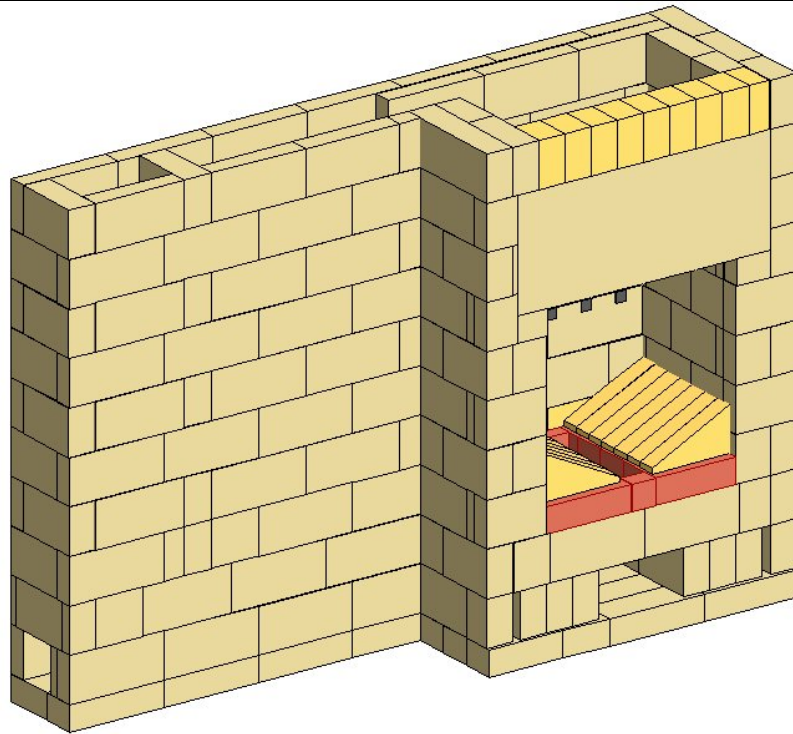


Figure 17 – course 11

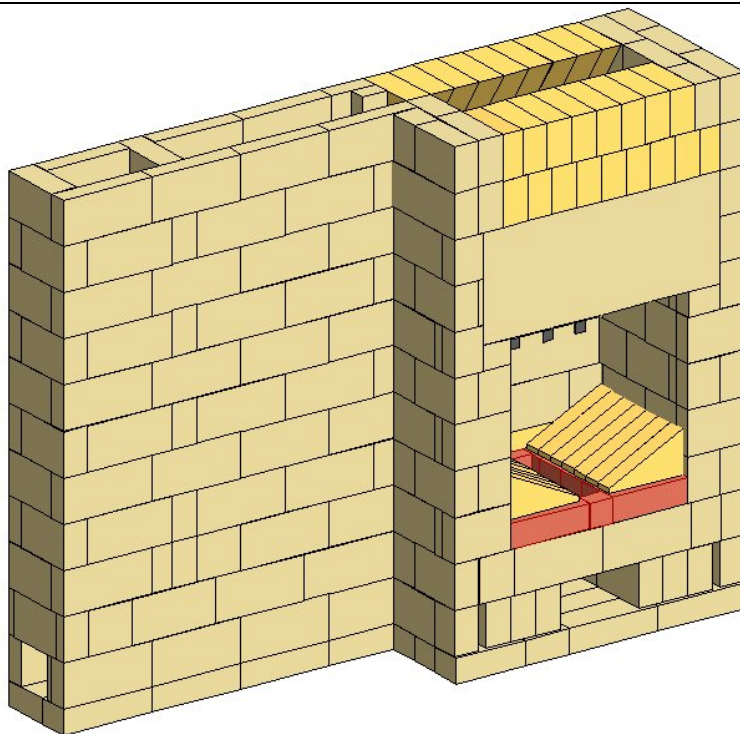


Figure 18 – course 12

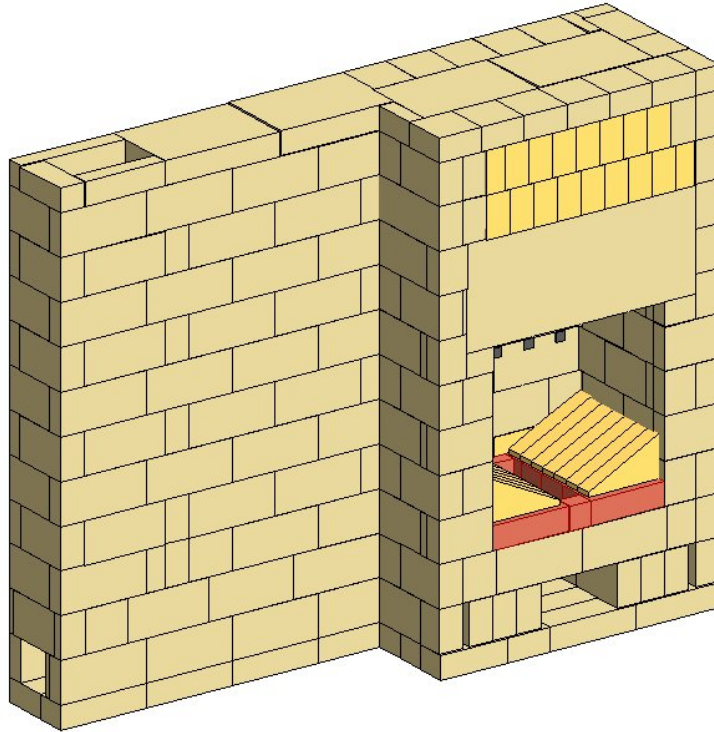


Figure 19 – course 13

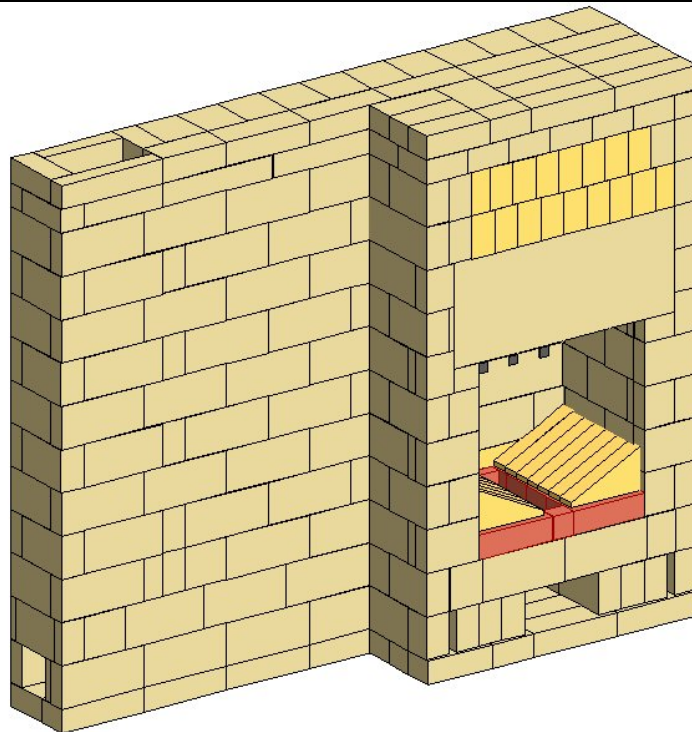


Figure 20 – course 14

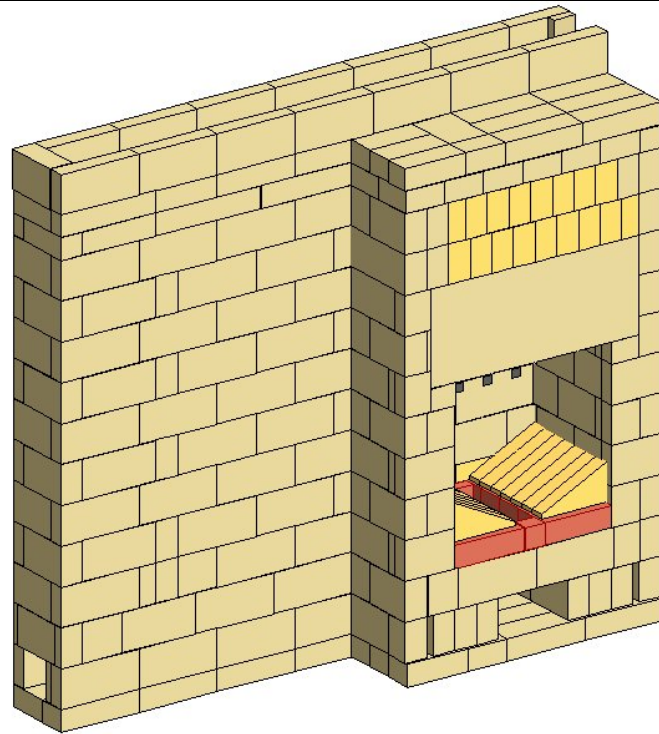


Figure 21 – course 15

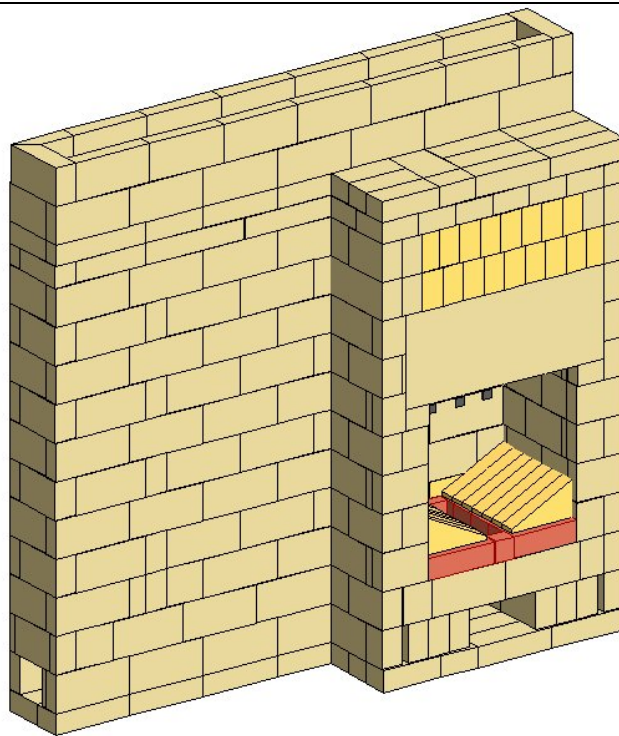


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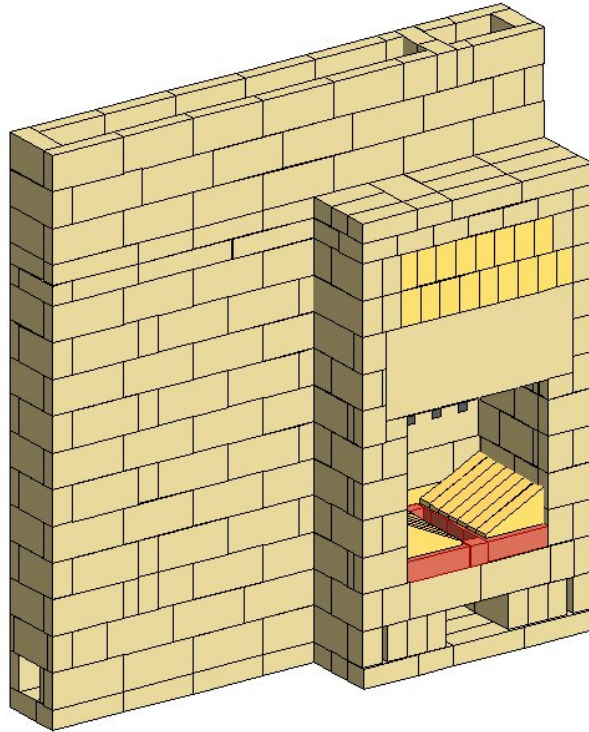


Figure 23 – course 17

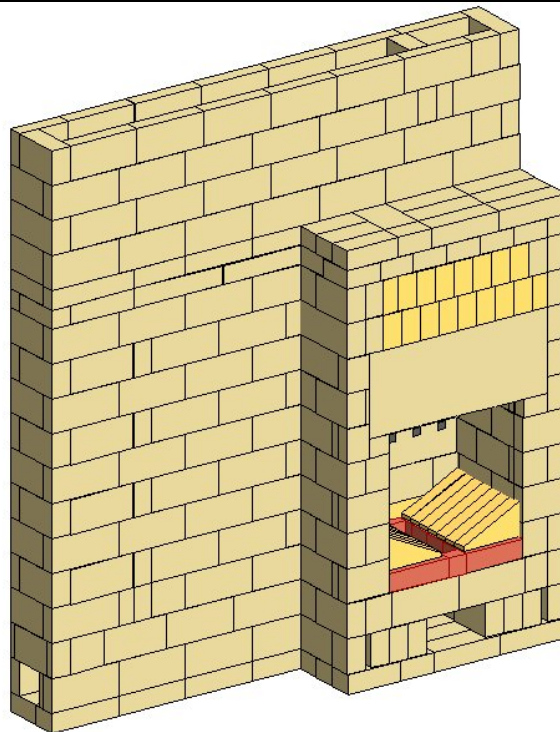


Figure 24 – course 18

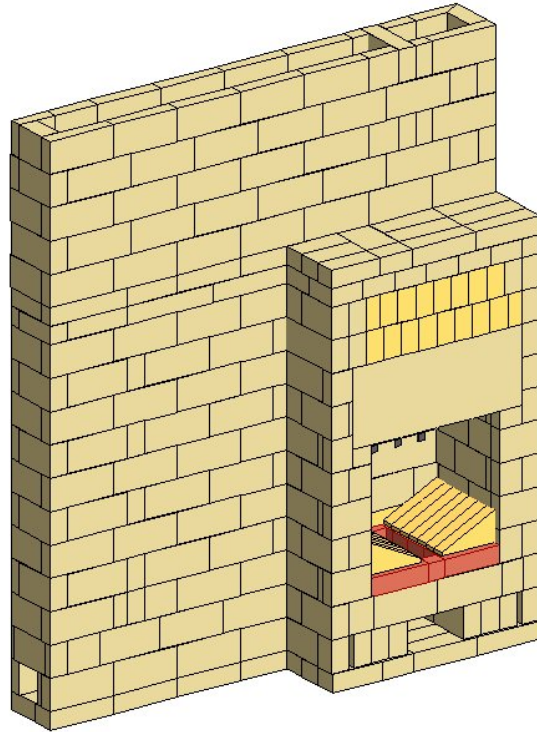


Figure 25 – course 19

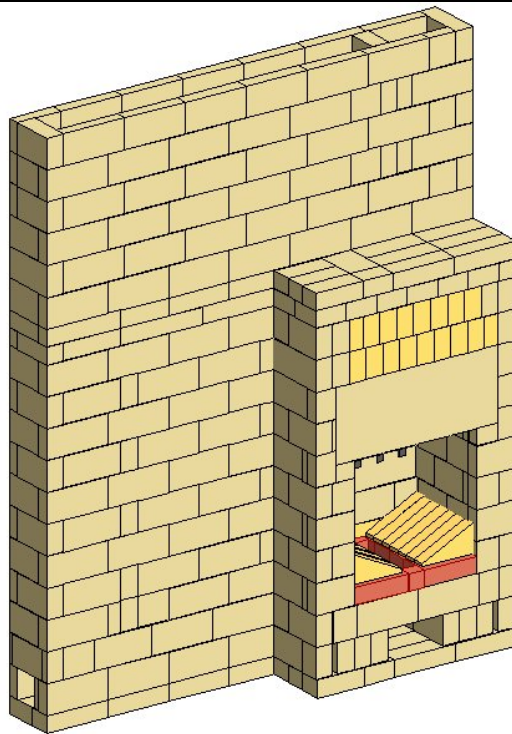


Figure 26 – course 20

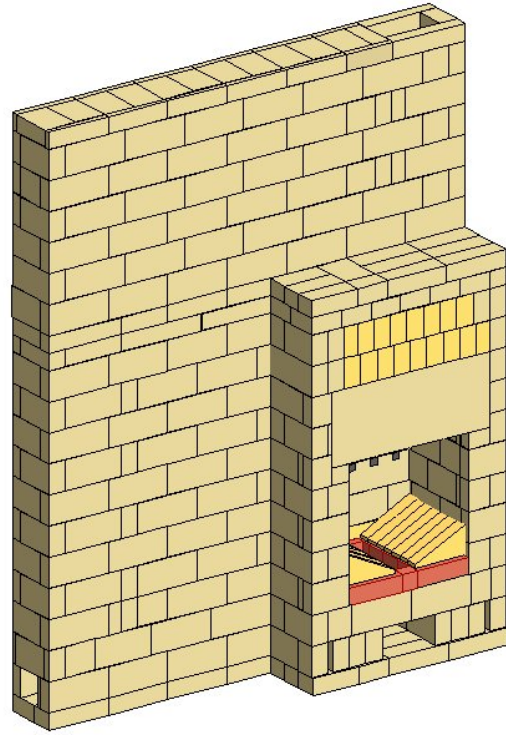


Figure 27 – course 21

3-D By Individual Course

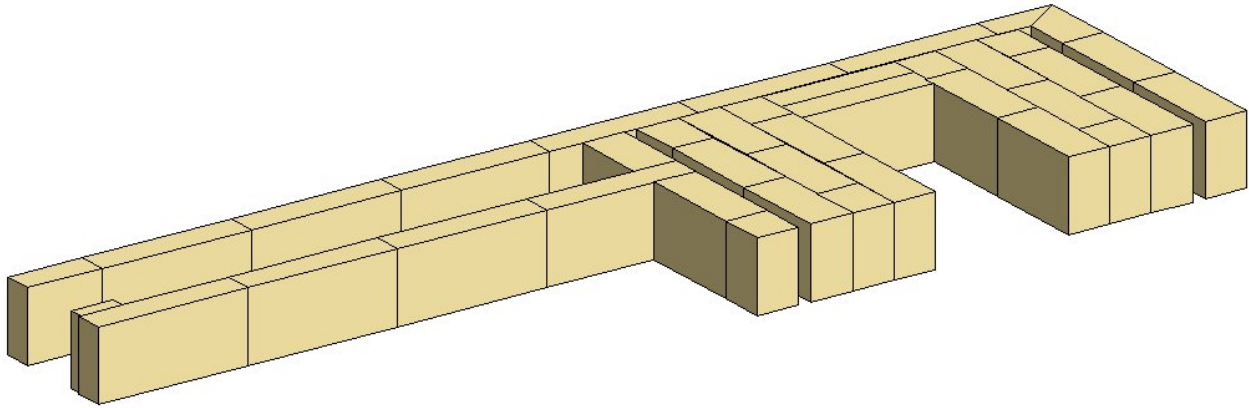


Figure 28 – course 2 (see Figure 7 – course 1 for course 1)

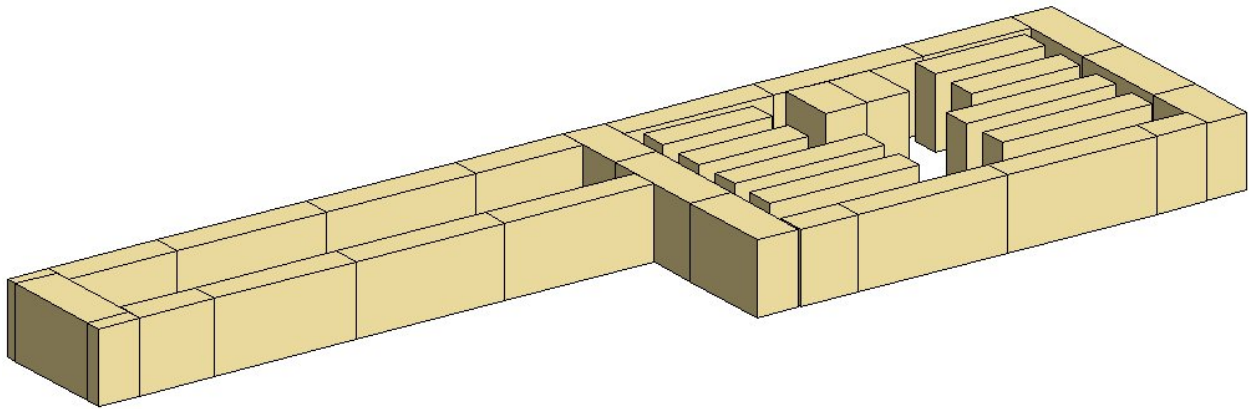


Figure 29 – course 3

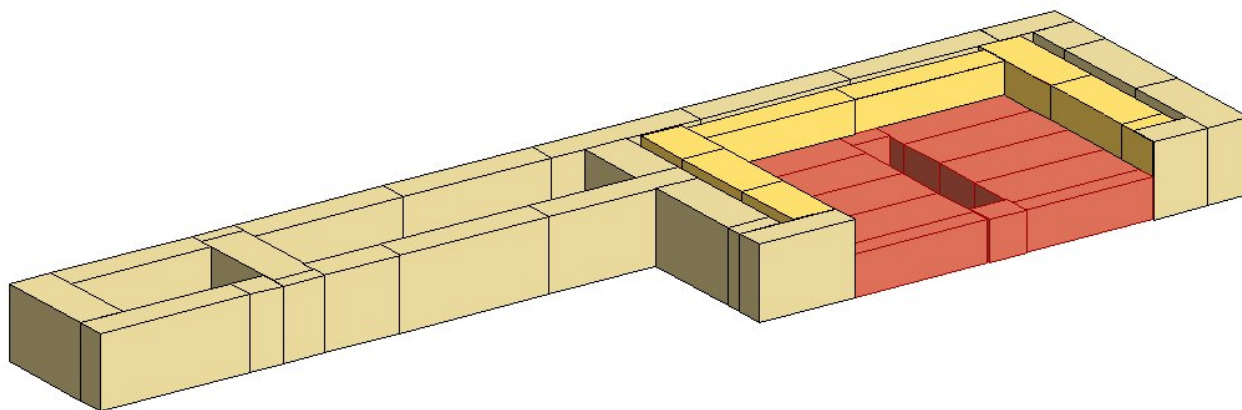


Figure 30 – course 4

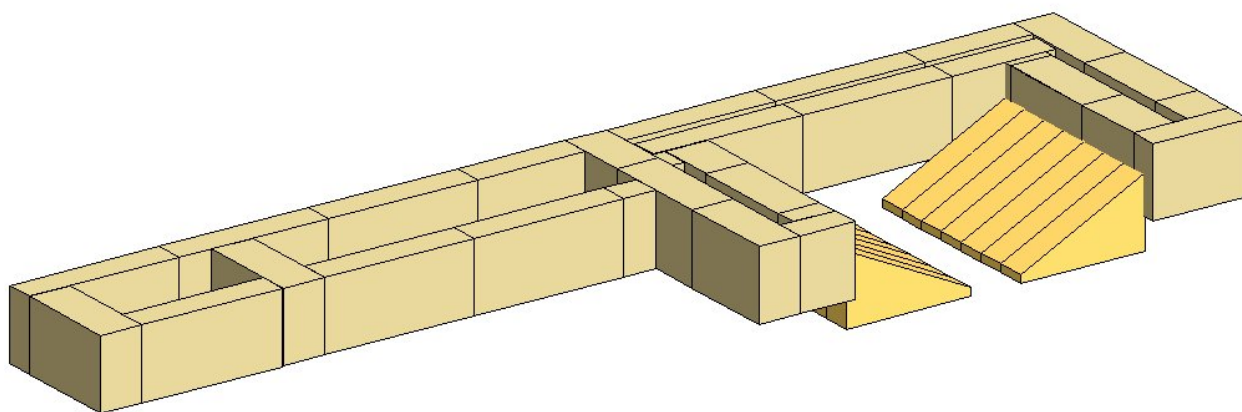


Figure 31 – course 5

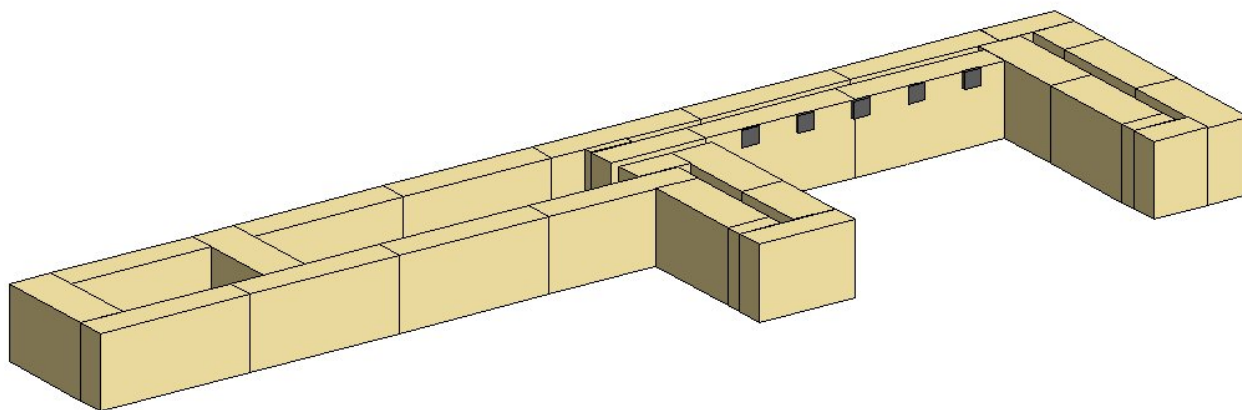


Figure 32 – course 6

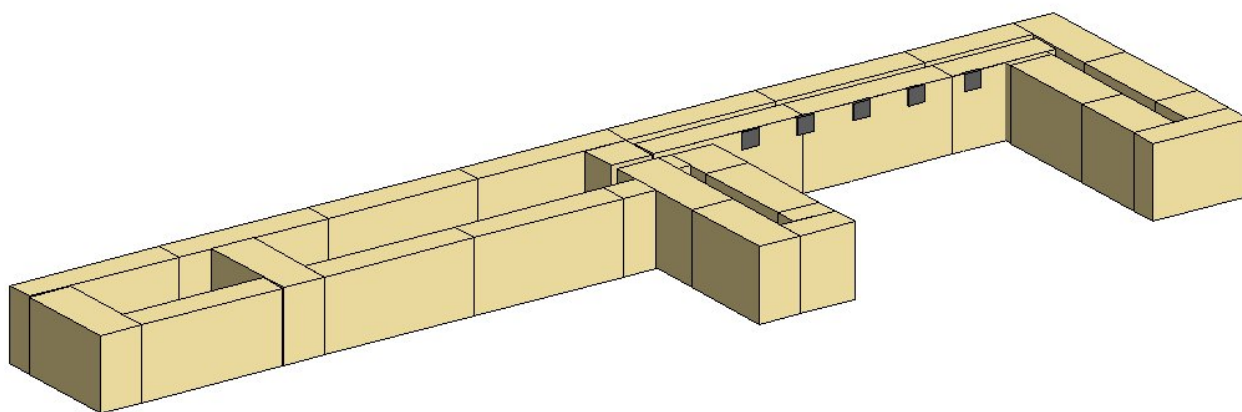


Figure 33 – course 7

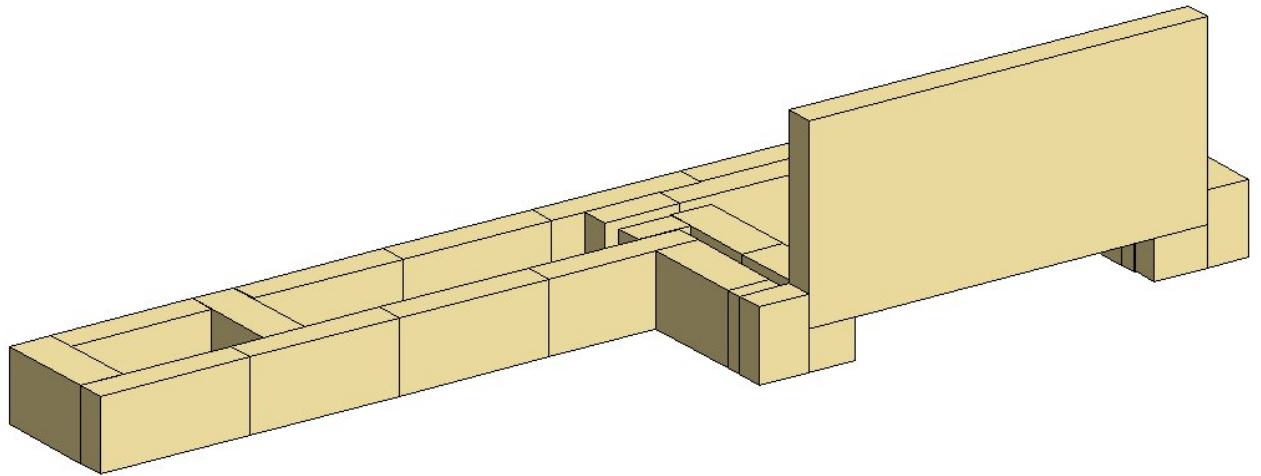


Figure 34 – course 8

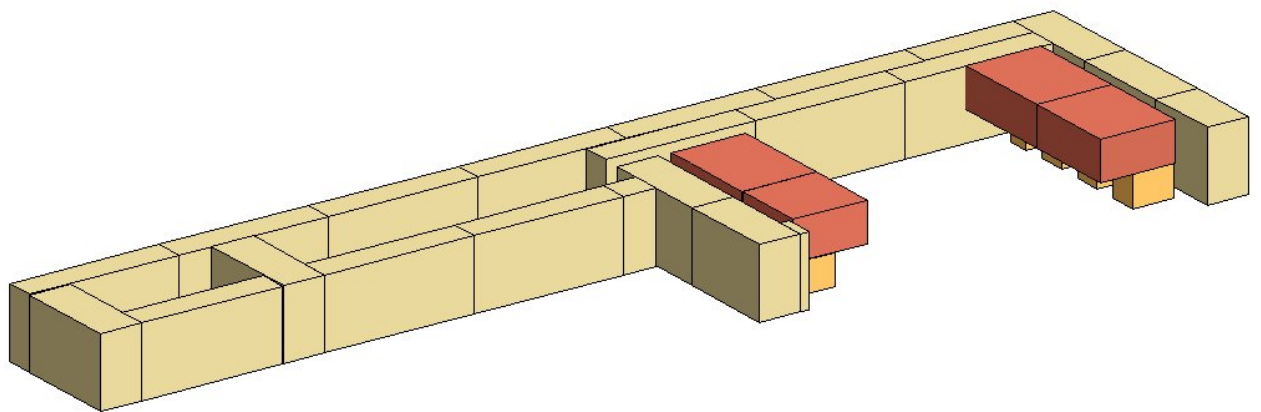


Figure 35 – course 9

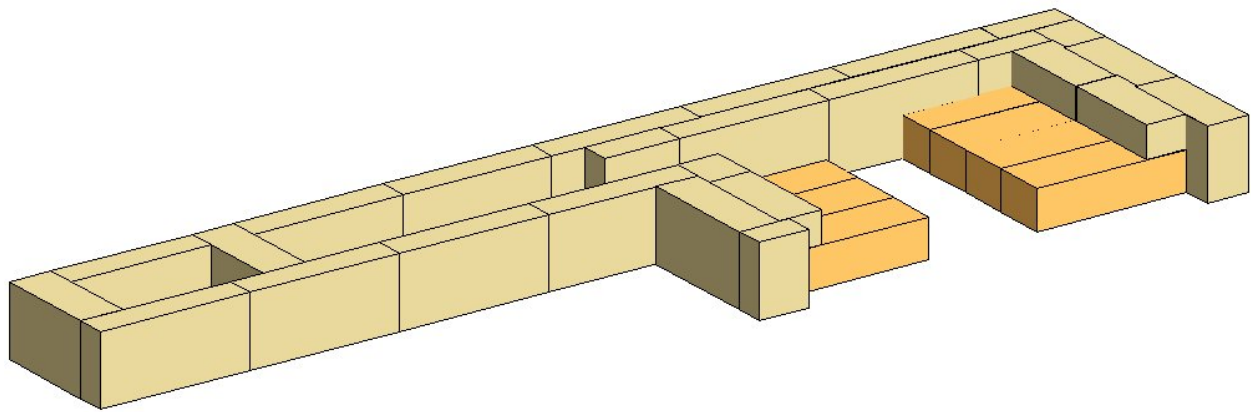


Figure 36 – course 10

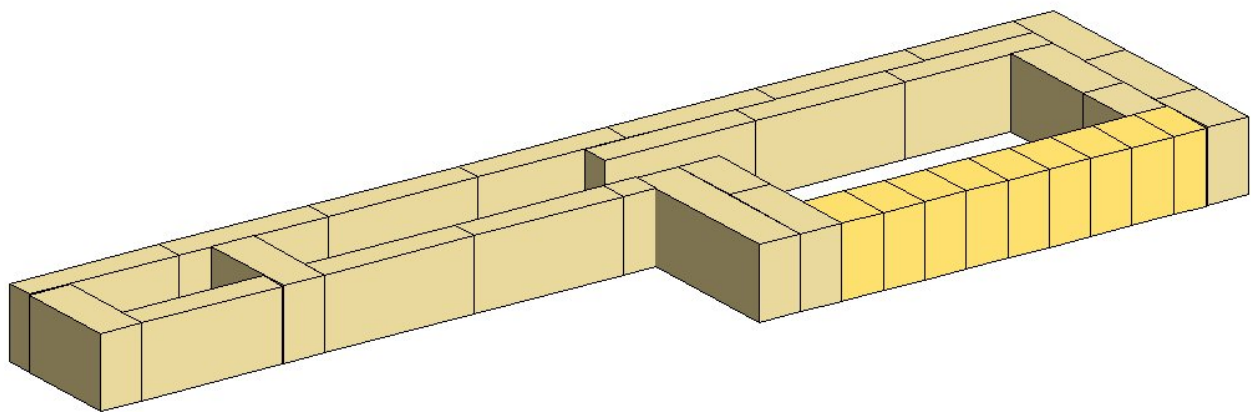


Figure 37 – course 11

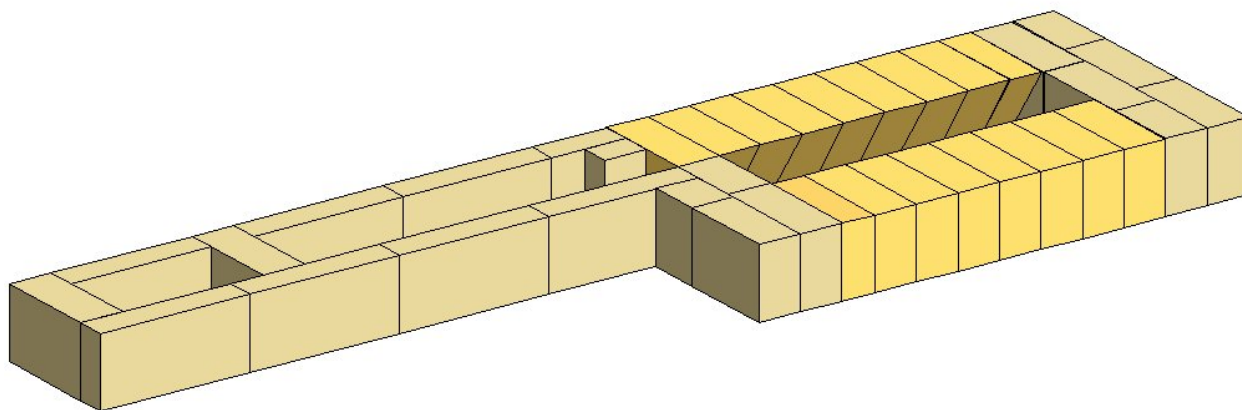


Figure 38 – course 12

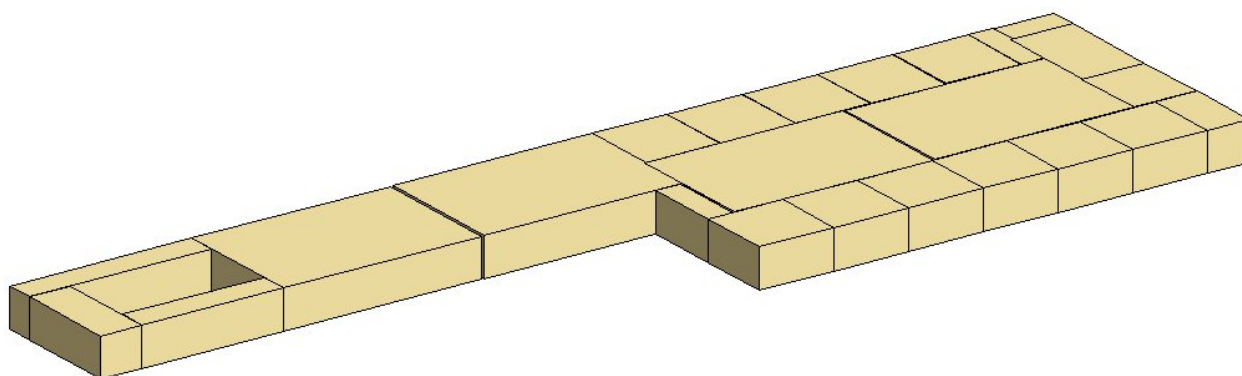


Figure 39 – course 13

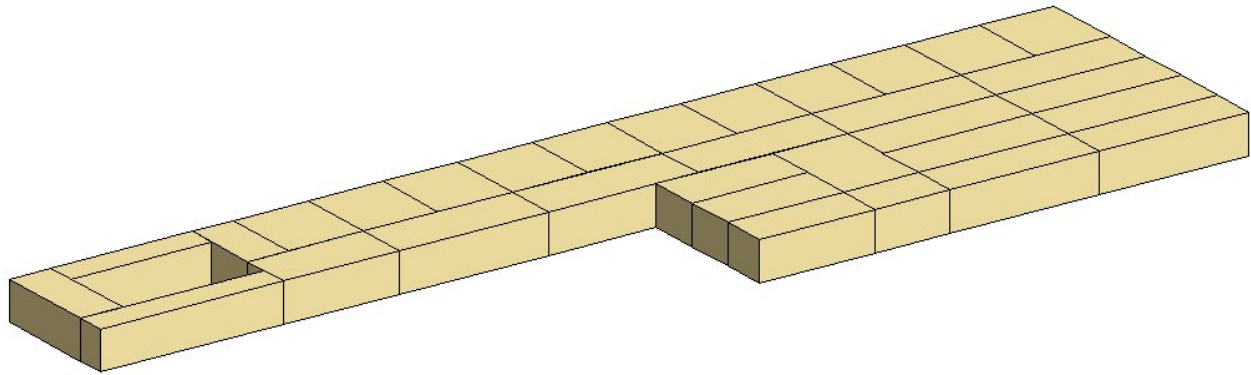


Figure 40 – course 14

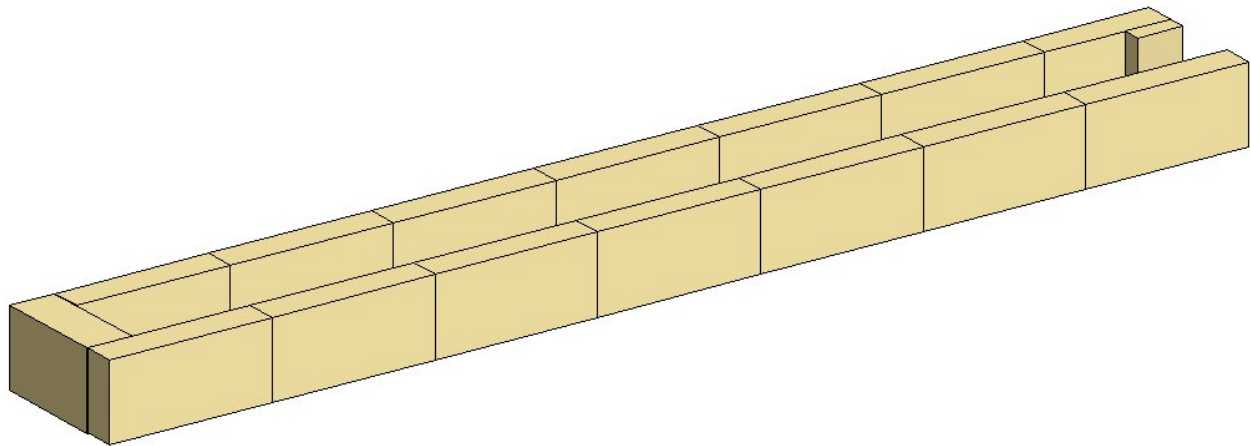


Figure 41 – course 15

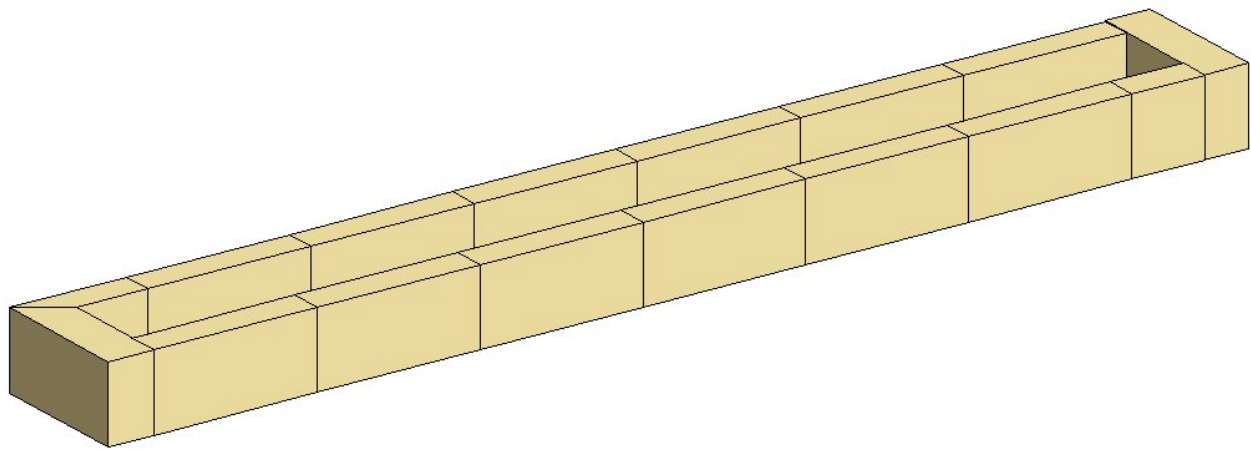


Figure 42 – course 16

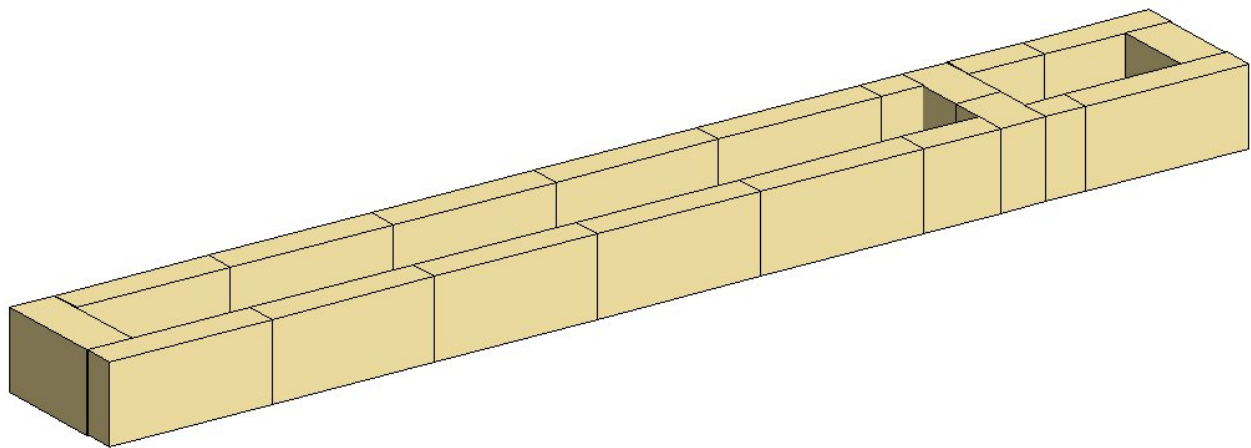


Figure 43 – course 17

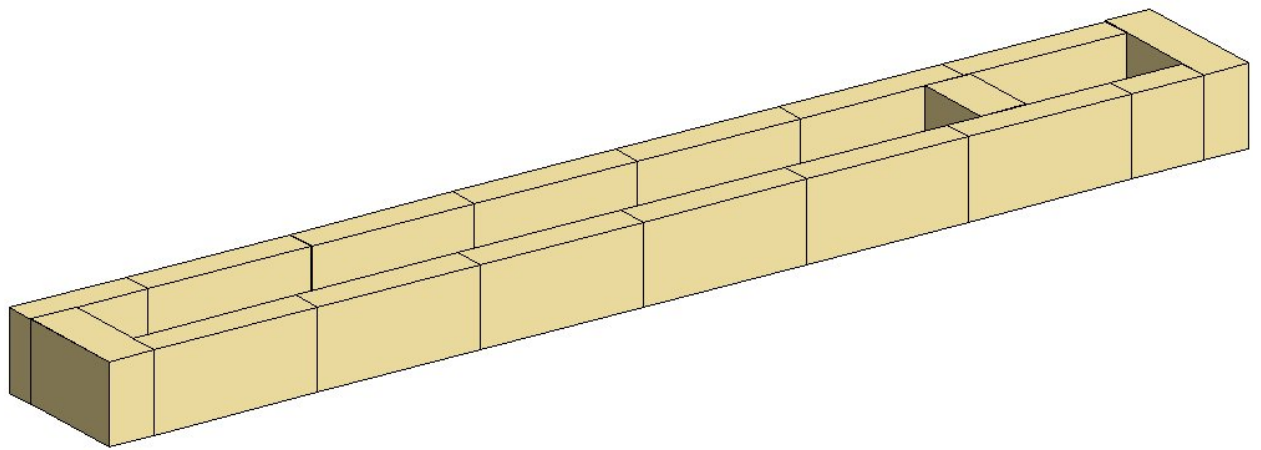


Figure 44 – course 18

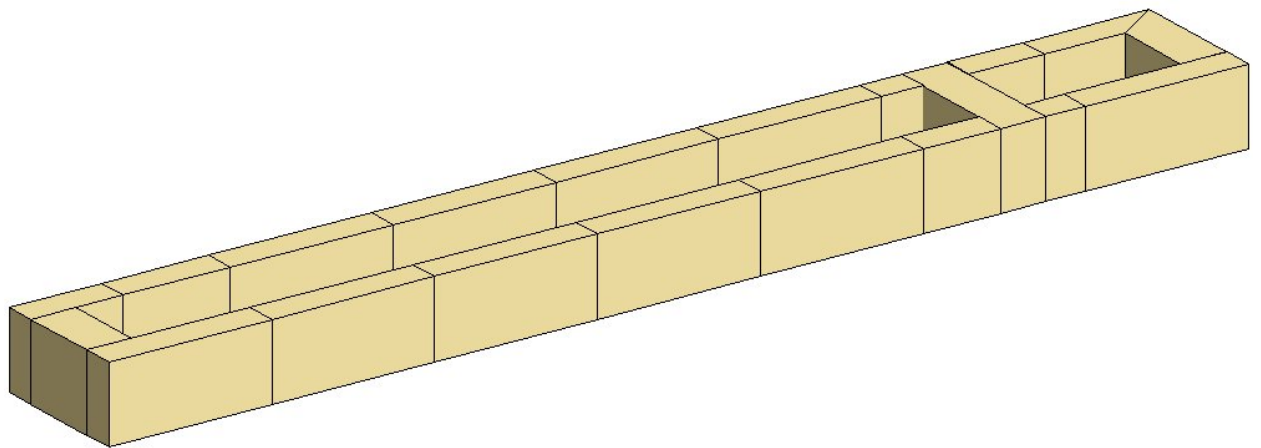


Figure 45 – course 19

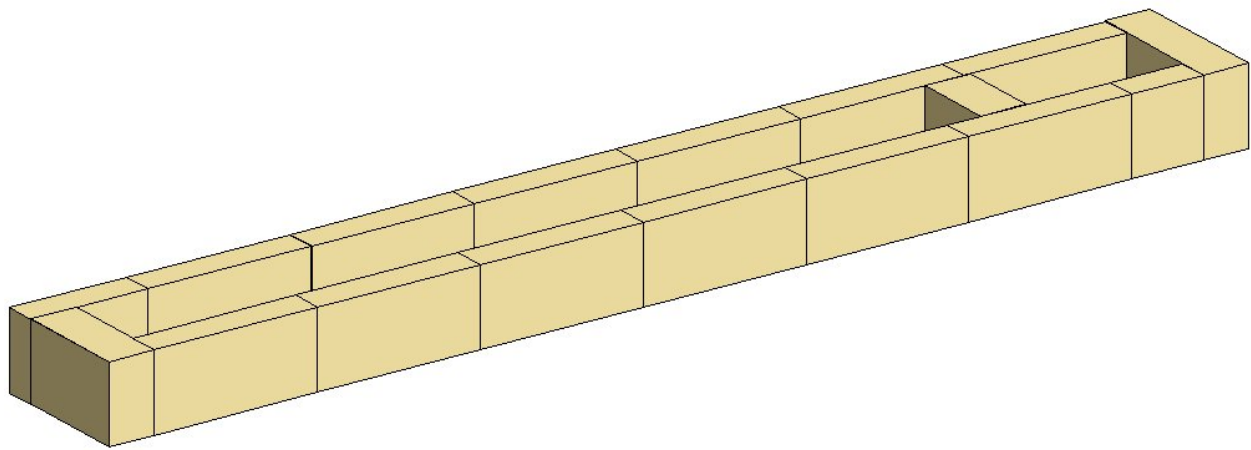


Figure 46 – course 20

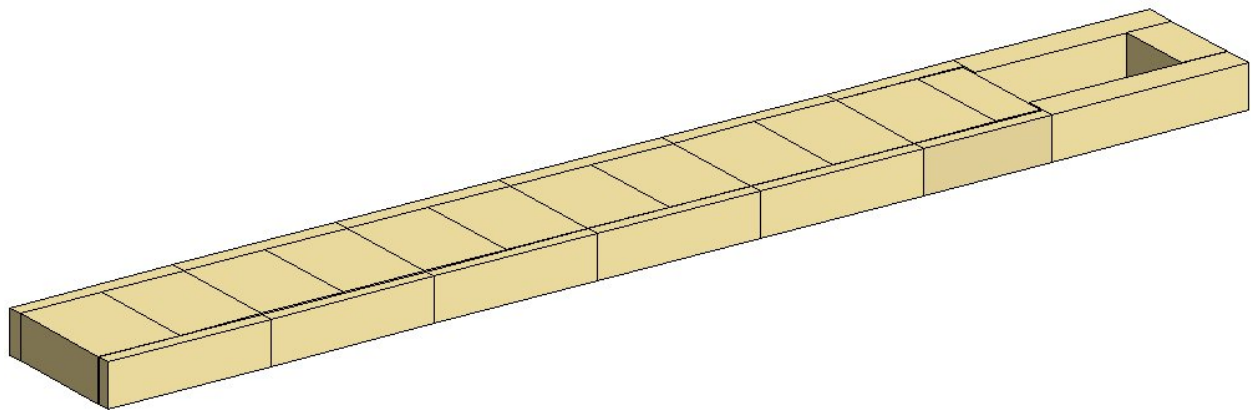


Figure 47 – course 21

Plan Drawings with Notes

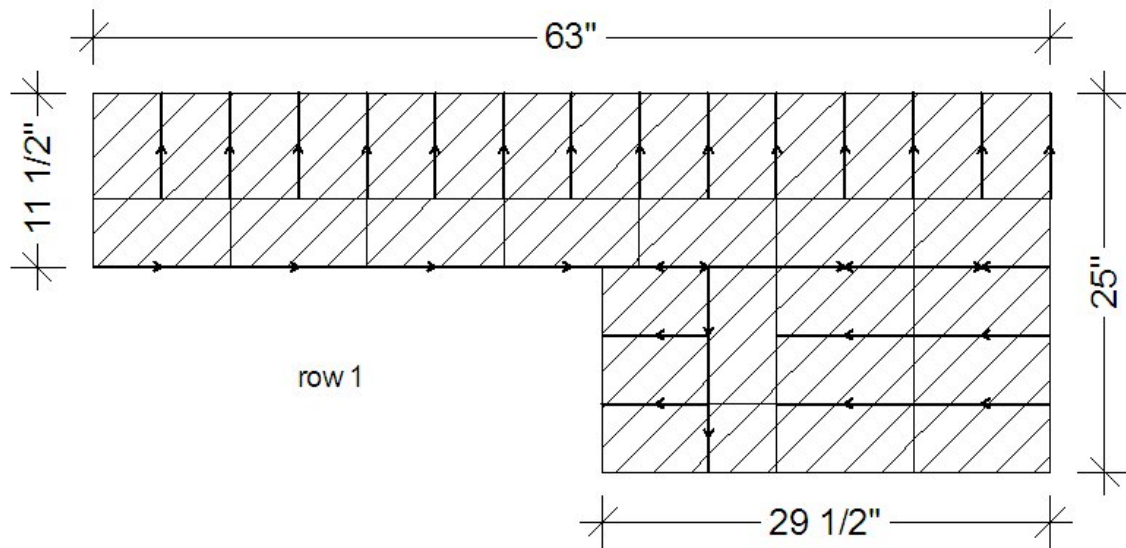


Figure 48 – course 1

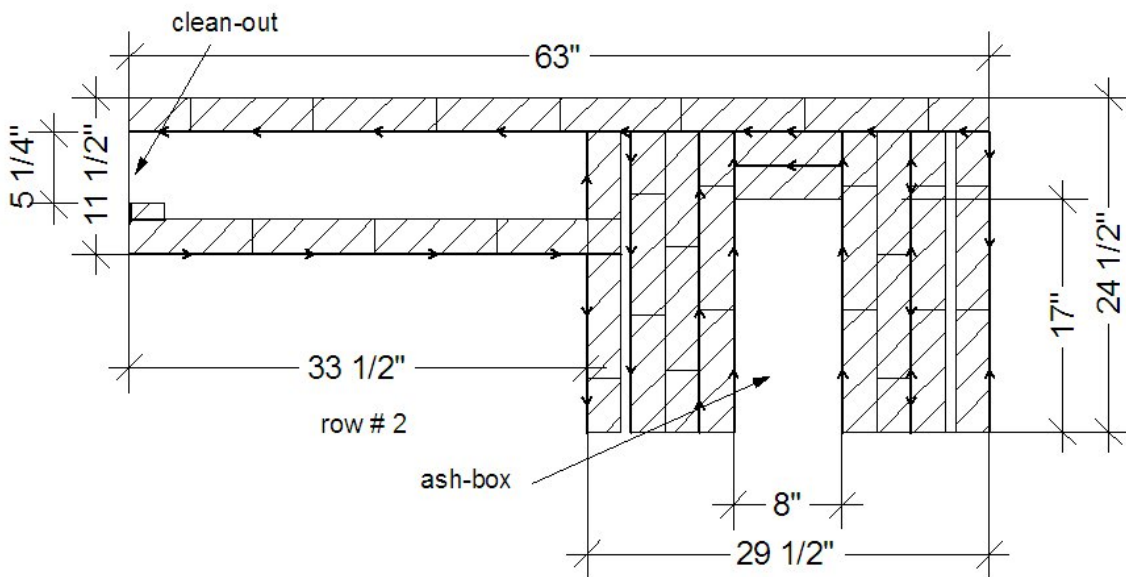


Figure 49 – course 2

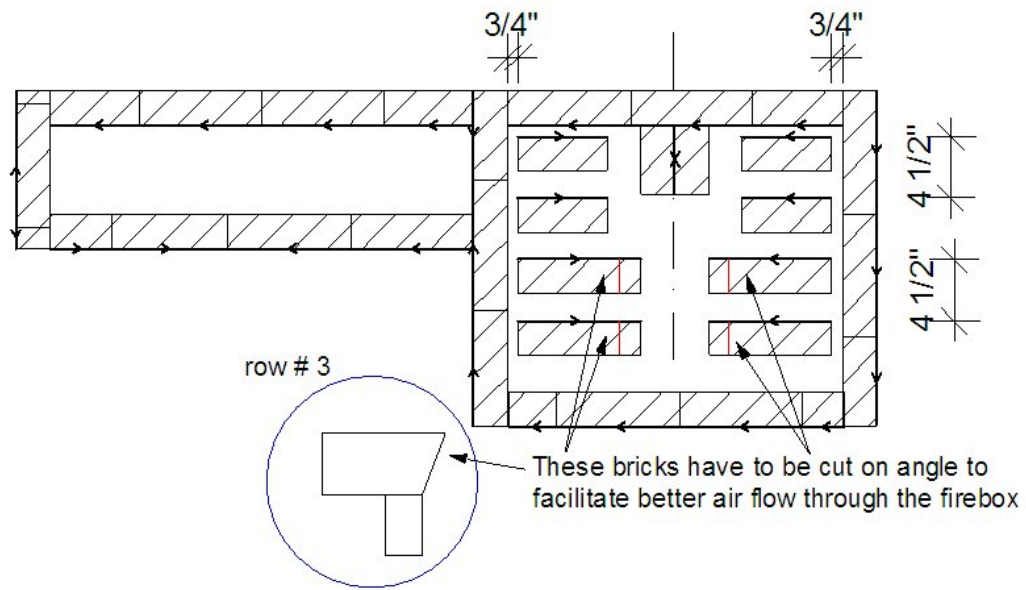


Figure 50 – course 3

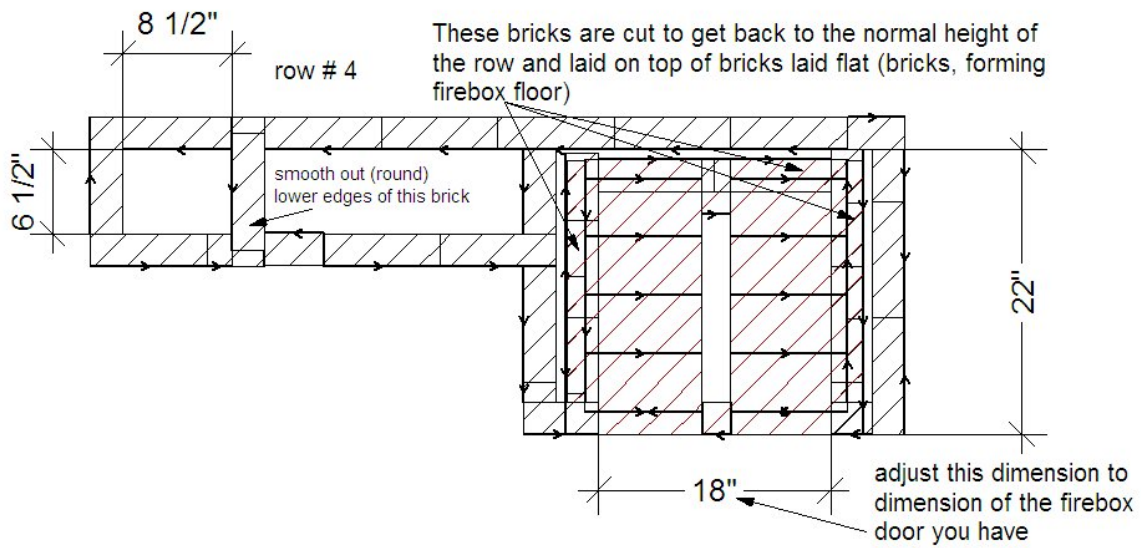


Figure 51 – course 4

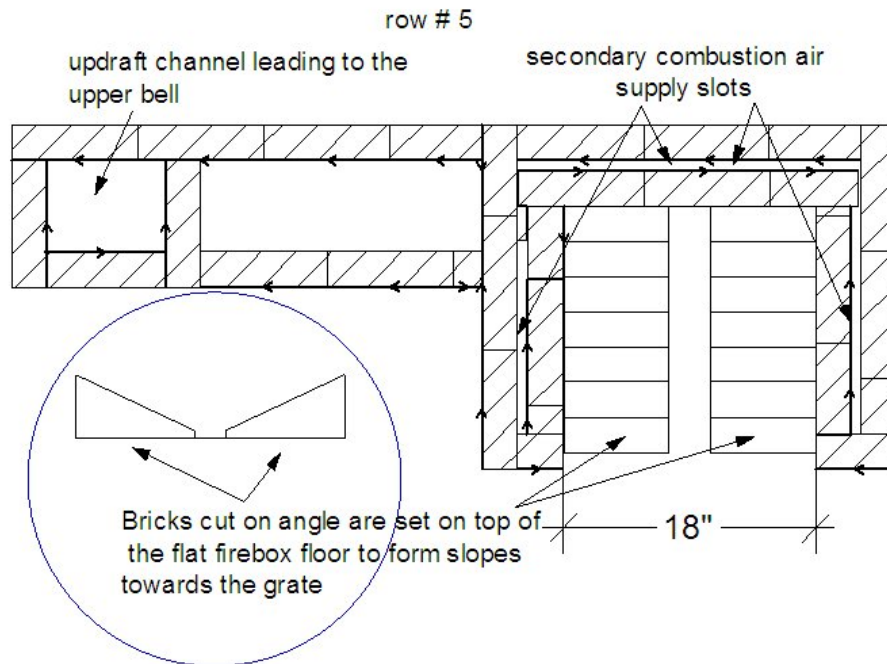


Figure 52 – course 5

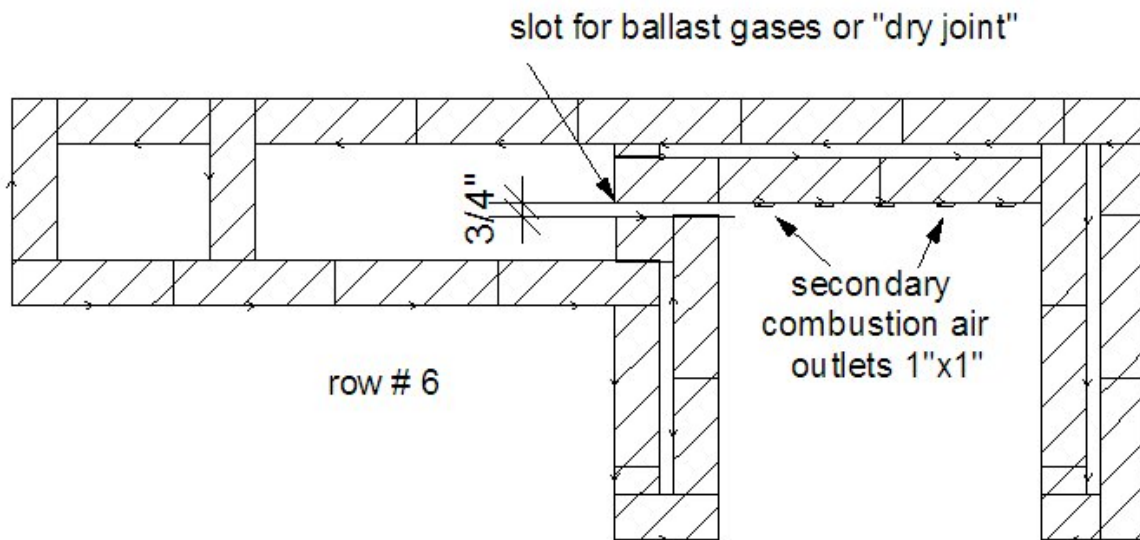


Figure 53 – course 6

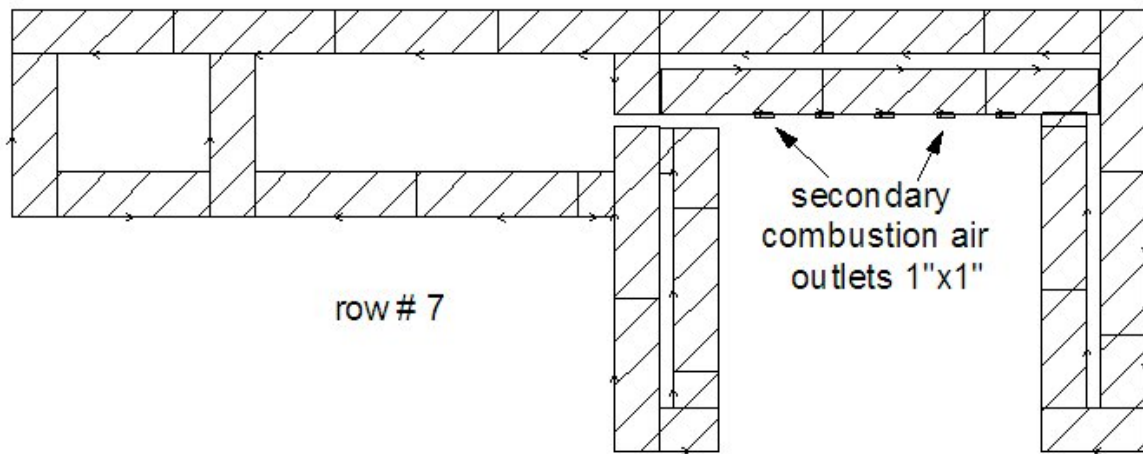


Figure 54 – course 7

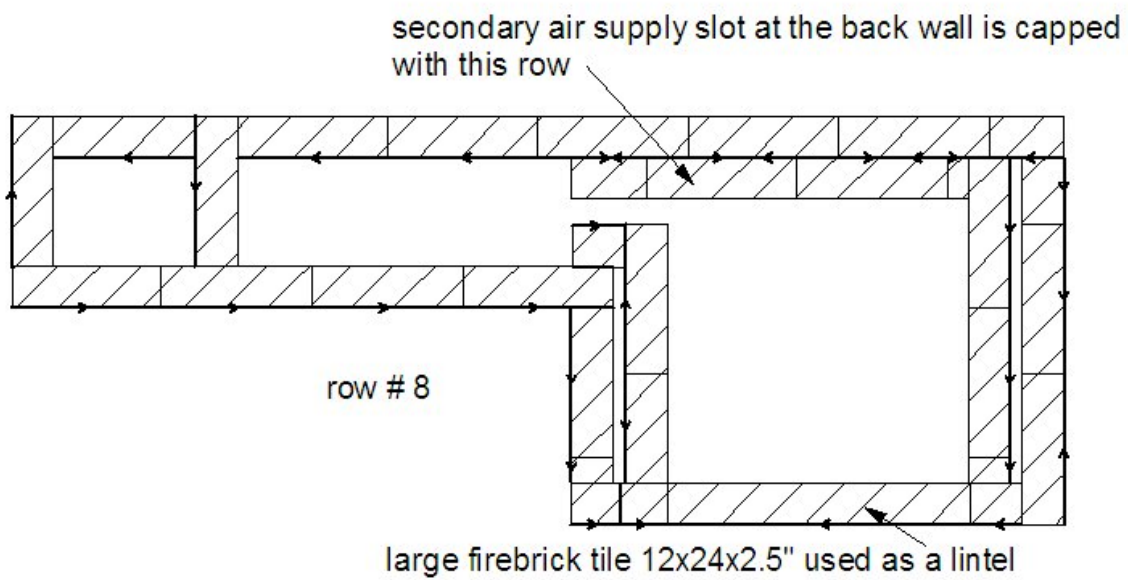
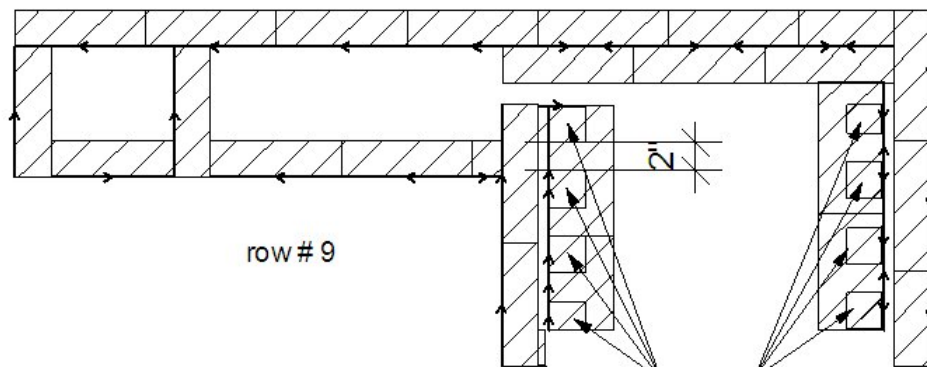


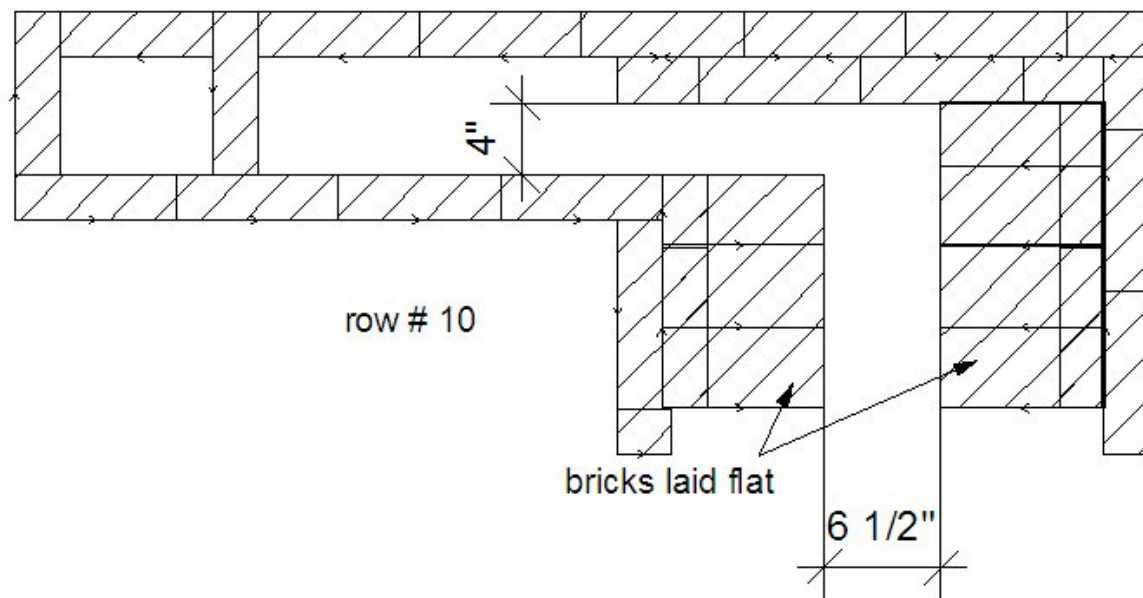
Figure 55 – course 8



row # 9

These little bricks are laid first to form 2x2 1/2" outlets for secondary combustion air. They are capped with full bricks laid flat (see 3D view)

Figure 56 – course 9



row # 10

bricks laid flat

6 1/2"

Figure 57- course 10

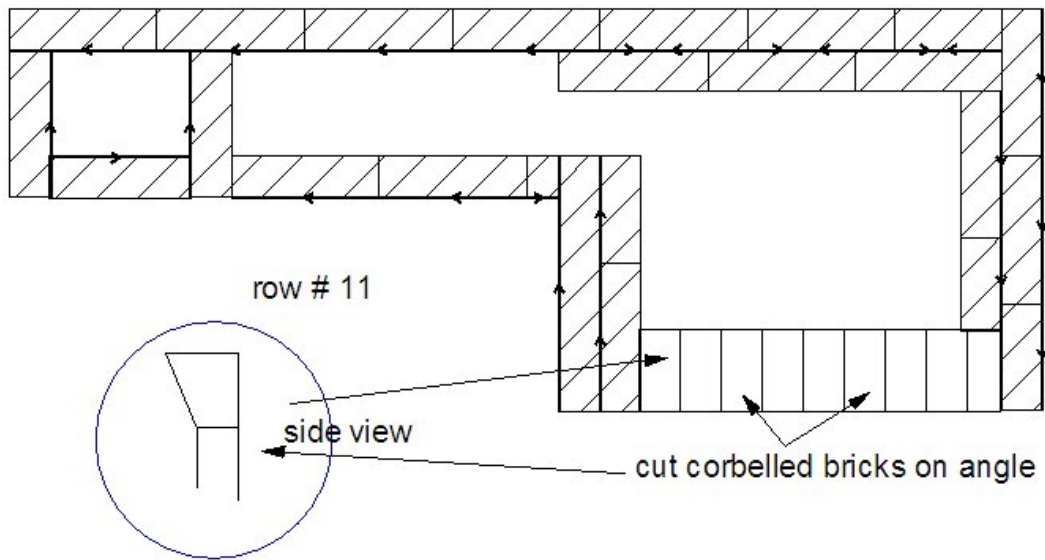


Figure 58 – course 11

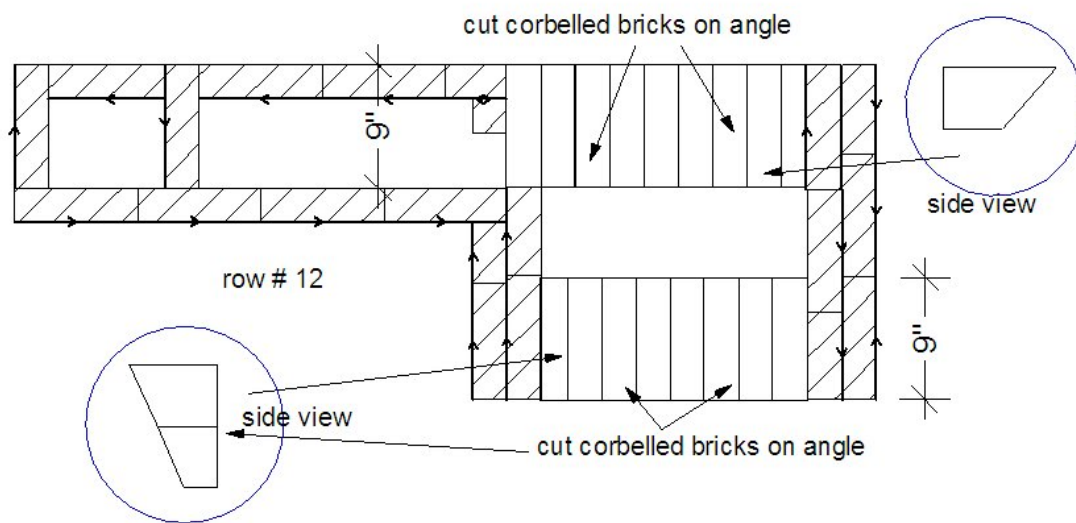


Figure 59 – course 12

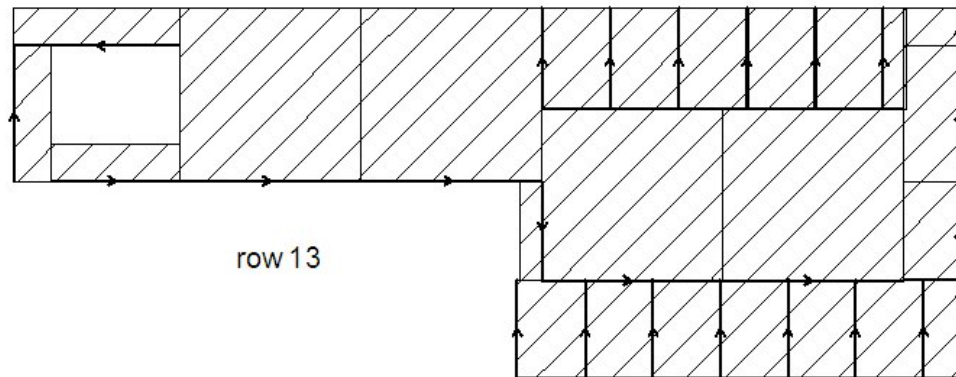


Figure 60 – course 13

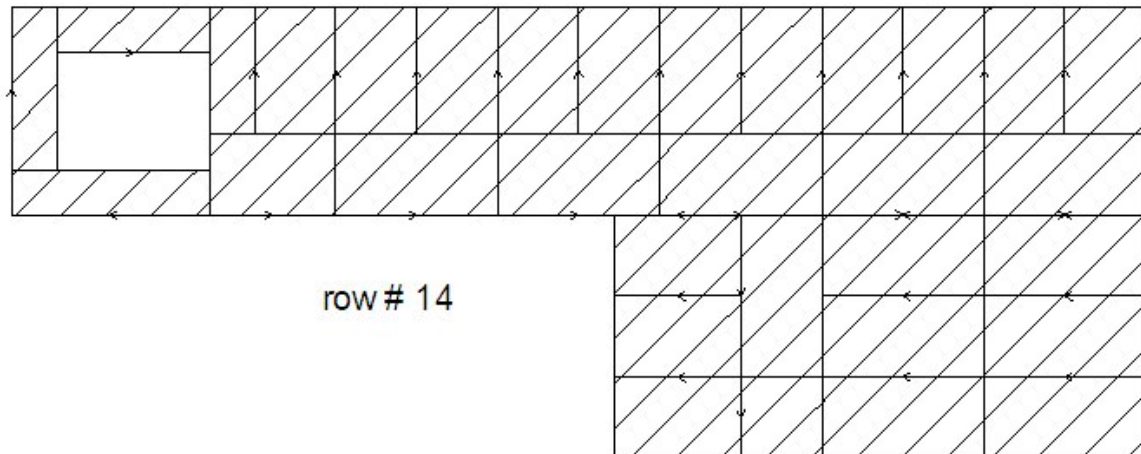


Figure 61 – course 14

The diagram shows a rectangular channel with hatched top and bottom walls. On the left, there is a vertical wall section and a sloped wall section. Arrows indicate the flow direction: entering from the left, exiting to the right, and a 'clean-out' path at the bottom right corner.

Figure 62 – course 15

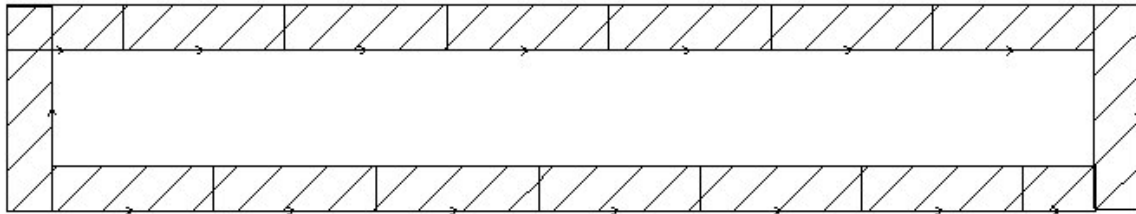


Figure 63 – course 16

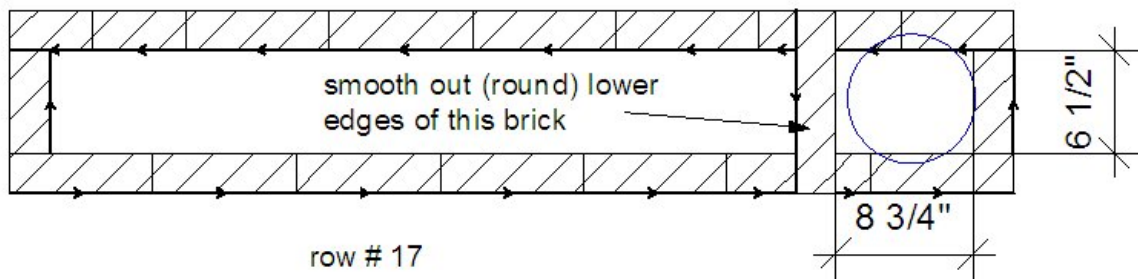


Figure 64 – course 17

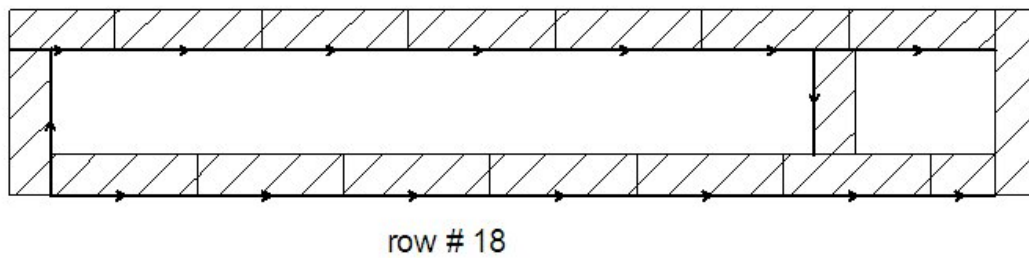
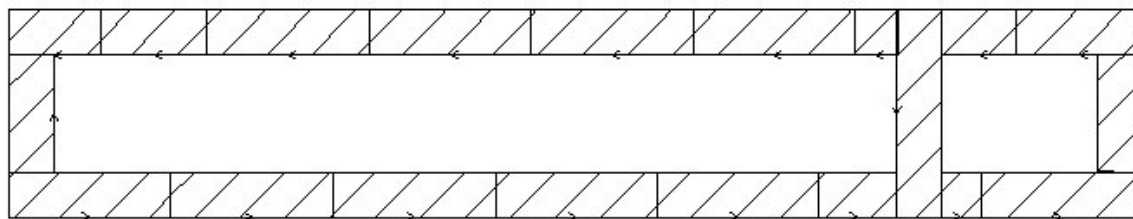
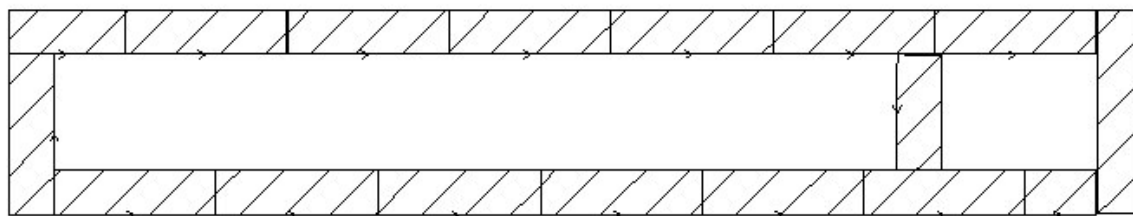


Figure 65 – course 18



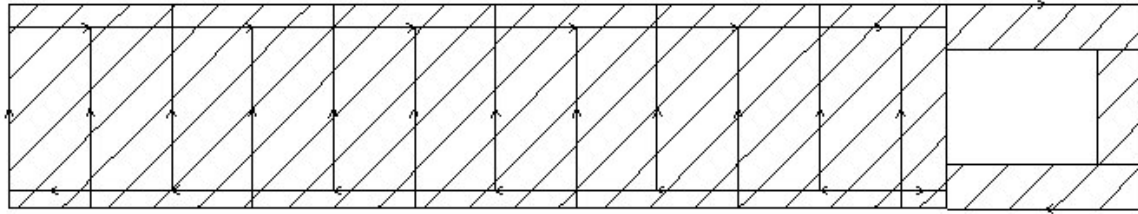
row # 19

Figure 66 – course 19



row # 20

Figure 67 – course 20



row # 21

Figure 68 – course 21

Photo Assembly Sequence:

<http://mha-net.org/docs/v8n2/wildac08f.htm>