Cut List:
¾ plywood used

2 of 18x40 (side walls)
2 of 36x36 (front and back walls)
1 of 34.5x40 (floor)
8 of 17” 1x4 (ripping 2x4 in half works fine) (outside vertical trim pieces)

8 of 4” 2x4 (we made a few extra) (floor supports)
1 of 27x48 (roof short)
1 of 27 ¾ x48 (roof long)
1 of 38x2x2 (roof support and alignment)
2 of 1x3 (approximately 27 and 25 inches in length, but measure for finished look)

HOUSE
Cut each piece and then modify the 36x36 pieces to have the roofline on front and back walls.

Roofline: Find centerline of board both horizontally and vertically. Connect 2 marks and cut the roofline. To be absolutely certain that your rooflines match, cut one first and then use it as a template to mark the second one.

Entry door: Your vertical center line is used here to mark the center of your circle for the upper part of the entry. Center of circle is 13.5” from base along the vertical centerline. The bottom of the doorway is 4.5” from the base and the sides are at 11” and 25” respectively. Cut this out with care and save it for use as a template for the next house.

Assembly. If you mimic the wooden block placement on the side walls (as seen in second photo) by placing the blocks lined up with the bottom of the wall panels then it will provide a perfect platform to set the floor on. Once we secured the floor to the bottom (making sure that the corners lined up as well as possible, we secured the sides in several spots (using 16 gauge nails from a nail gun) to make securing the finish panels for the outer corners easier to install.

Finally, secure each corner with toenails to provide more stability.

Assembled using 16ga galvanized nails for the blocks to the walls and floor to the blocks, 1 ½ inch construction screws to hold the finish panels to the walls, and 2 inch construction screws to toenail the corners.
17" 2x4 ripped to 50% width. Used on outer corners. Need 8.

4" 2x4 blocks used under flooring. Need 8.

Peak of entry is 20.5" from base. Center of circle is 18" from side and 13.5" from base.

Peaks are 18 inches as well.
Side panel boards are not structural. To strengthen the corners, toenail screws in from both sides so that they connect the plywood while not going all the way through the side panel boards. Green arrows representing toenailed screws.

Blocks are cut to 4" long so that it's obvious which way to lay them so that they raise the floor to exactly 4.25" height to match the entry height. The uncut width is 3.5" for a 2x4.
ROOF
Center and attach support beam to short roof panel at bottom face. Place long roof panel against short roof panel on a 90 degree angle and attach to support beam. This should make a V (see pic below).

Shingling the roof is the same as any other standard roof.
Start with felt paper, then place bottom row shingles upside down (shingles have gaps on the bottom and an upside down shingle covers the plywood/felt to better protection). Then use standard stagger
pattern to cover the rest of the roof. If you can use specific roof cap singles for the top it is easier, but if not just cut your shingles at the gap to make your own caps. Use 7/8 roofing nails to secure shingles (they won’t go all the way through the plywood and poke our furry friends). Use roofing tar or any form of weatherproofing sealant on any exposed nail heads. Plenty of youtube videos on the singling portion.

You can get hooked blades for any standard razor knife that will make it easier to cut the singles along the edge of the dog house. Shingles are tough, so be careful.