



THE HOWS PROJECT
DOG AND CAT
HOUSE PLANS

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The HOWS Project Dog and Cat House Plans

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DOG HOUSE CONSTRUCTION MANUAL

Many thanks from our HOWS team to all the students, scouts, teachers, scout leaders and other construction volunteers. You are a very important part of the success of the HOWS Project. We cannot thank you enough for your time and efforts in building the dog houses. Please do not hesitate to contact us with any questions.

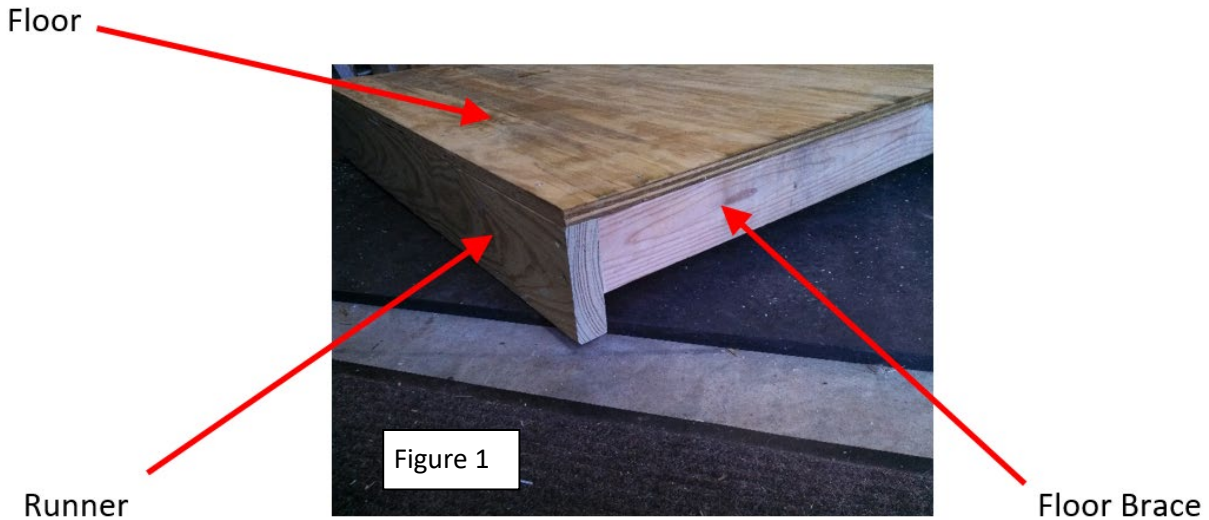
The materials used for the dog houses are exterior grade products. The lumber is pressure treated. The screws are rated for exterior use, as well as, the varnish and caulk.

To maintain straight saw cuts with your work, please consider making a cutting guide. You can find many options for plans on the internet.

Please alert us to any leftover material that you may have when we pick up your completed dog houses. We can use it! We use many sizes and shapes in the rehabbing of donated houses, building cat houses, making cleats to attach insulation to the floor bottoms and model dog houses for informational tables at special events. Please help us to conserve material and save money for HOWS.

FLOOR SYSTEM

Before starting to build, check the "measurements spreadsheet" for the measurements of the size of house you will build. We will choose a medium for an example. Using the layout page, cut the pieces of plywood for your house. Also, cut pieces for the runners and the braces. The floor will be 28" x 28". The runners will be 28" and the floor braces will be 25". The floor braces are marked on the layout page slightly longer to allow for additional cuts for sizing.



Attach the floor to the runners with 3" screws. The runners should be flush lengthwise to the floor. See Figure 1. After cutting to the correct length attach the floor braces in the same manner, but between the runners. Use a clamp to hold them in place while screwing to the floor. The braces should then be attached to the runners with two 3" screws through the runner into each brace. Pre-drilling will help to avoid the brace from splitting.

The difference in the width of the runners and the braces allows for ventilation under the house. It also makes it easier to secure the house on uneven ground. The entire floor should be painted with spar varnish/water sealant and allowed to dry overnight. If the material is too damp to varnish, it can be done after the house is built and before it is picked up for delivery. Our HOWS volunteers will attach foam board insulation under the floor system before it is assigned to a dog.

TWO PIECES ON ONE SIDE OF THE HOUSE

On some houses we will implement the use of two pieces of plywood for a side. Some of you have done this in recent years. This helps utilize more of the plywood, thus reducing our costs. Let's use the medium size house as an example. The high side is 28" x 28". Referring to the layouts on page 15, one piece will be 20" x 28" (high side A) and the other piece will be 8" x 28" (high side A). The pieces will be attached in a horizontal manner to the high corner braces. Put the narrower piece on top. Make sure that the edges meeting in the field fit

tightly together. A heavy bead of caulk should be placed on the meeting edges before attaching the second/lower piece to the braces. Remember there will be a 2" overlap at the bottom of the brace. See Figure 2.



Figure 2

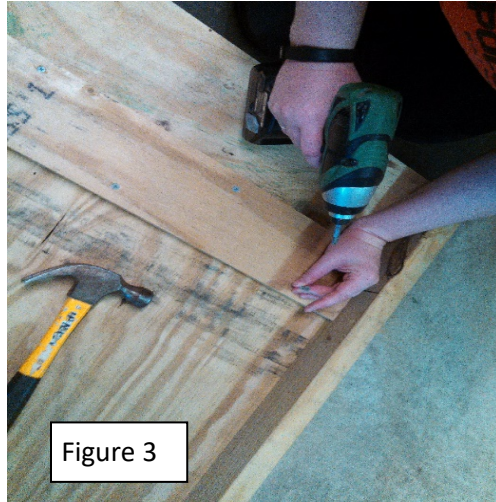


Figure 3

Cut a leftover piece of 4-6" wide piece of plywood the length of the seam on the inside. Caulk the seam again on the inside if needed. Center and attach the plywood over the seam and attach with 1¼" screws. See Figure 3. Not all houses will require this technique.

HIGH AND LOW SIDES

The high side on the medium house is 28" wide x 28" high, and the low side on the medium house is 28" wide x 24" high. You will need to cut braces for the corners. Brace angles for the medium houses listed on the measurement spreadsheet are 8 degrees.

Using that angle, cut the braces for the high side by measuring from the long point of that angle to 26" square cut. The lower braces will be measured from the short point to a square cut at 22". See Figure 4. Cutting the braces with these lengths will allow the sides to overlap the floor by 2 inches.

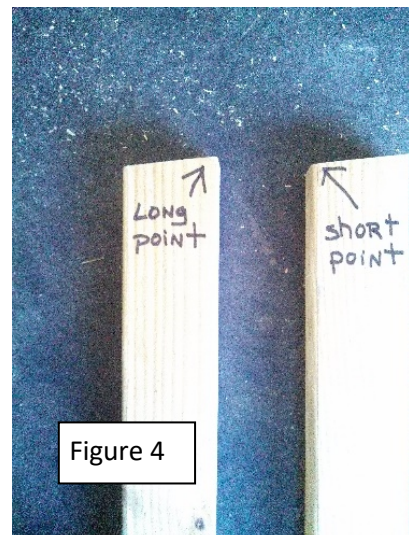


Figure 4

Place the two high side corner braces on the floor parallel to each other with the long point on top. Lay the plywood on top. Make sure the sides of the plywood are flush with the outside of the corner braces. The plywood at the top should come to the edge of the long point on the brace. There should be 2" of plywood extending below the square end. Secure the high side to the braces with 2" screws.

Place the two low side corner braces on the floor parallel to each other with the short point on top. The sides of the plywood should be flush with the outside of the corner braces. The edge of the plywood should be slightly below the short point of the brace. A straight edge may be placed on the top of the angled brace to determine how high the side can be placed. Please make sure that the 24" side of the plywood is attached to the braces.

Before attaching the high/low sides, determine which piece you would like to use for the front panel of the house. Place the high side on the same end of the floor that corresponds to the high end of the front panel you choose. A bead of caulk can be placed along the floor brace at 1½" from the top of the floor. That high side can then be set on the floor above the floor brace.

Hold the side flush and centered with the floor and attach with 2" inch screws through the overhang into the floor brace. The low side is attached the same way. See Figure 5.

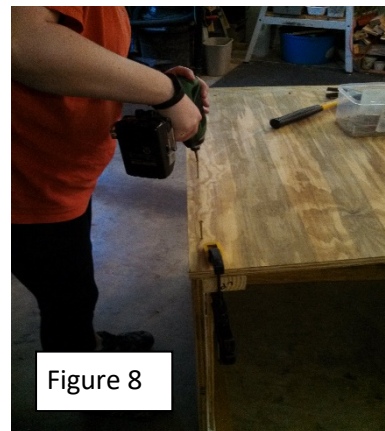


One should then pre-drill at 45 degrees through the corner brace near the bottom of each brace into the floor. Attach with a 3" screw. See Figure 6.

FRONTS AND BACKS

The high and low sides of the front and back panels are usually 3-4 inches different in height. This allows for rain to shed itself from the roof. The gentle pitch of the roof also allows the dog to sit on top. This is very important when a dog's space is limited.

With the high/low sides attached, lay the dog house with what will be the front side towards the ground. Take the back panel of the house and place it on the top. Check to see it fits properly around the edges. Remember the front and back panels will overlap the high/low sides. The upper two corners of the back panel should be flush with the corner braces. Mark with a pencil the lower edge of the back panel on the runner.



Remove and run a bead of caulk around the edge of the plywood of each high/low side and along the upper side of the line on the runner. See Figure 7. Replace the back side and attach to the runner and the high/low braces with 2" screws. See Figure 8. Wipe off any excess caulk.

Please refer to the layouts for the front panels. The double hound is on page 29, the extra large is on 25, the large is on page 21, the medium is on page 17, and the small is on page 13. Please cut out the correct size front panel for the house on which you are working. These front panels will allow for a two inch overlap of the floor system. They will also allow for a 5 inch "reveal" on the small and a 7 inch "reveal" on the other size houses. We measure our "reveal" from the bottom on the doorway to the top of the dog house floor. This distance is very important in helping to keep the dog's bedding in the house, as well as, providing a chin rest for the dog.



Figure 9

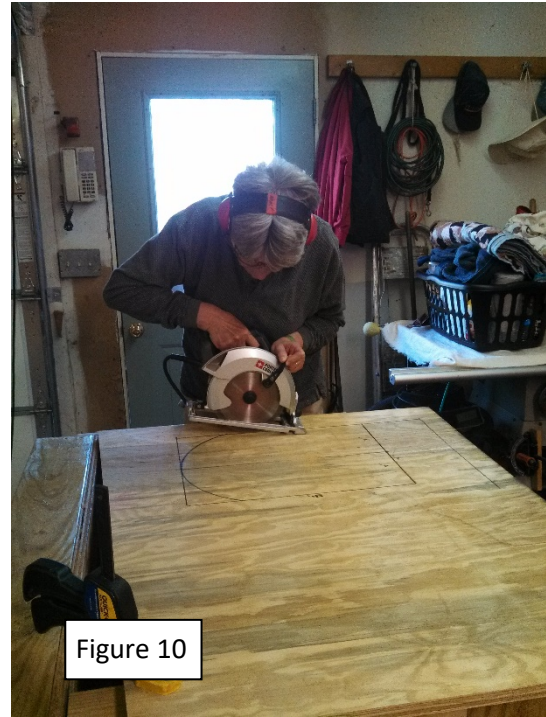


Figure 10

Mark the doorway on the interior of the front panel. Clamp the front panel to a sturdy surface and cut out the doorway. You can use a spade bit to create a hole for a jigsaw to cut out the opening. See Figure 9. You could also make plunge cuts with a circular saw on the straight sides. See Figure 10. You can finish the curved part of the opening with a jigsaw. See Figure 11.

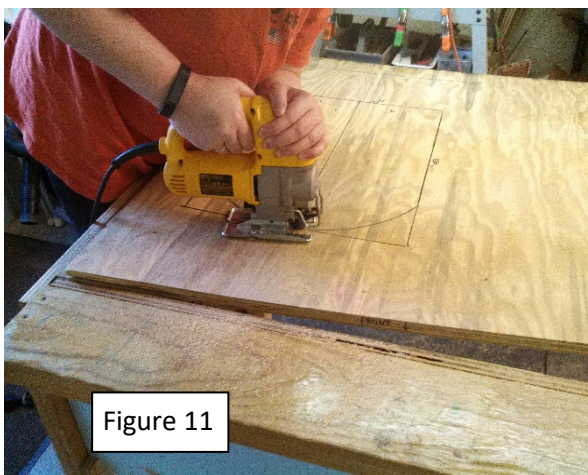


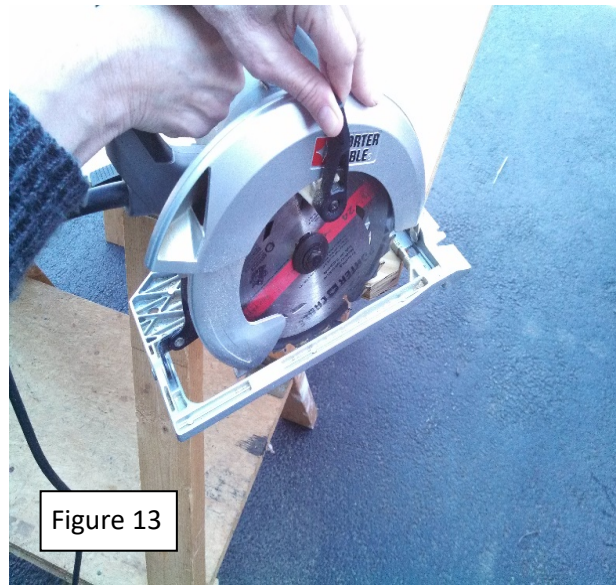
Figure 11

A router with a round-over bit can be used on the inside and outside of the doorway to leave a smooth finish. This should be done before attaching the front panel to the house.

Turn the house so that the back panel is facing down. The front panel can then be attached in the same manner as the back panel. Caulk around the perimeter and attach with 2 inch screws along the runner and the high and low braces. After attaching the final side of the dog house, turn the house upside down. Please caulk around the bottom of each side where it contacts the floor system.

ROOF

A chart on the layout pages for each size house provides the measurements for the overhang. To provide more area in which to attach the roof, cleats can be attached along the upper edge of an interior wall. The cleats should be slightly below the edge of the side panels. The cleat should be attached with a 2" screw from the outside. See Figure 12.



Choose the better face of the roof to be on top. Align the roof to the proper position over the house. Depending on the width and placement of the cleat, use a 3" screw to attach the roof to the cleats and the corner braces. If a 3" screw is too long to use with the cleat, you may angle the 3" screw or use a 2" screw.

Please cut the sharp corners off of the roof. Use a 1" right triangle as a guide to cut the corners. See Figure 13. A router with a round-over bit can be used on both sides of the perimeter of the roof to leave a smooth finish. The roof should be painted with a coat of spar varnish/water sealant.

CAULKING

Caulk around the top edges of the sides where the roof meets the house. Caulk around other areas where air may enter the house. Look inside the house to see if there are any areas of light that need to be caulked. See Figure 14.

SANDING

If a router is not available to use, please sand the corners and edges of the roof. Also, sand around the inside and outside of the doorway.

Please check your dog house thoroughly for any sharp edges or screws that may be exposed inside the house. Please take the time to clean the house of any sawdust and other construction debris.

Your dog house is now complete and will provide a deserving dog with a warm and dry place to live this winter. See Figure 15.



Figure 14



Figure 15

HOWS greatly appreciates your time and attention to these details. Thank you very much for all your efforts and participation in this project!



DOG HOUSE FINAL CHECK LIST

1. Please remove any screws that are exposed inside the dog house! We cannot deliver a house that would subject any dog to injury. Many volunteer hours are spent correcting this issue each year.
2. Please remove any staples from the edges of the plywood and ends of the lumber. This will protect the dogs, as well as, the many folks that will handle the dog house from possible injury.
3. Caulk any areas/seams that may allow cold air and rain into the structure.
4. Spar varnish/water sealant should be applied to the top and bottom of the floor system. The roof should be sealed on the top and on the roof overhangs. Exterior walls can also be sealed.
5. Please use sandpaper or a router with a round-over bit to smooth the perimeters of the doorway and roof on both sides.
6. The inside of the house should be free of screws, sawdust, door cut outs and trash.
7. Please follow the dog house plans that are provided. The material you have been given is based on the size of house we have asked you to build.
8. Please return any leftover plywood, lumber, screws, caulk and sealants. This saves the HOWS organization money and allows us to help more animals.

HOWS CONSTRUCTION REMINDERS

Several years ago HOWS developed a construction manual to help with the building of the dog houses. Over time we have made some modifications to the plans and have tried to make them more user friendly. Many changes were based on our findings in the field during deliveries. We thank you for your efforts and feedback as our manual has evolved.

There are three areas that we feel need more attention.

1. ALIGNMENT OF THE DOORWAY

In the small house, the bottom of the doorway should be 7 inches from the bottom edge of the front panel. On all of the other size dog houses, the bottoms of the doorways should be 9 inches from the bottom edge of the front panel. The side of the doorway for all of the houses should be 4 inches from the higher vertical side of the front panel. Diagrams for the front panels and placements of the doorways are found on pages 13, 17, 21, 25 and 29.

2. SIZE OF THE DOORWAY

The small doorway is 10 inches wide and 12 inches high.

The medium doorway is 11 inches wide and 14 inches high.

The large doorway is 12 inches wide and 16 inches high.

The extra large doorway is 14 inches wide and 20 inches high.

The double hound dog doorway is 12 wide and 16 inches high.

The height is measured from the bottom of the doorway to the apex of the curve at the top of the doorway.

3. DANGEROUS SCREWS

There are still numerous dog houses where screws are left protruding into the interior of the house. Please check and double check for this problem when the construction of the house is finished. We cannot deliver a house with this issue until it is made safe for the dog.



SMALL DOG HOUSE CUT LIST

MAKES 2 HOUSES

Materials needed:

2 – 4' x 8' sheets of $\frac{3}{4}$ " pressure treated plywood

2 – 2" x 6" x 8' pressure treated

Plywood Cuts

2 – 35" x 40" (roofs)

2 – 24" x 24" (floors)

2 – 24" x 24" (high sides)

2 – 24" x 21" (low sides)

4 – 25½" wide, 24" to 21" high (2 fronts and 2 backs)

2" x 6" Cuts

4 – 2" x 3½" x 24" (floor runners)

4 – 2" x 2" x 21" (braces for the floor)

4 – 2" x 2¾" x 22" (high side braces)

(Length measured from long point of 7° cut to square cut)

4 – 2" x 2¾" x 19" (low side braces)

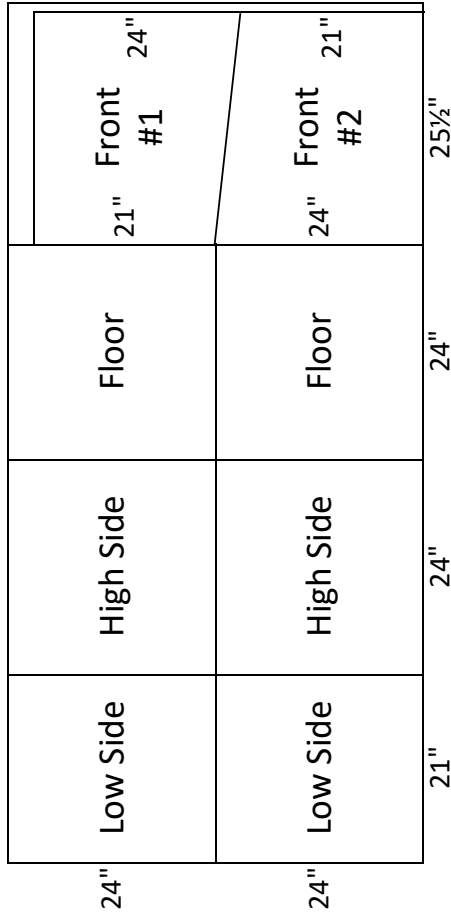
(Length measured from short point of 7° cut to square cut)

*Please refer to layouts on next page for cutting directions.

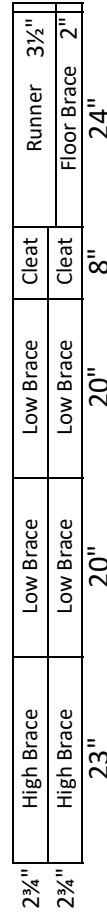
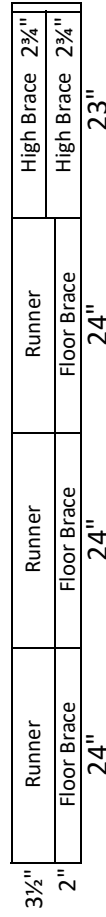
SMALL DOG HOUSE LAYOUT

MAKES 2 HOUSES

Plywood



2" x 6" x 8'

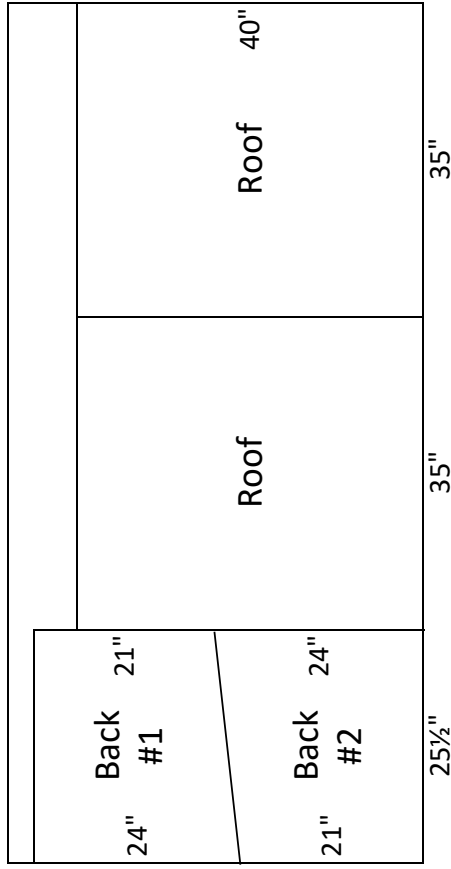


Braces are marked longer to allow for additional cutting.

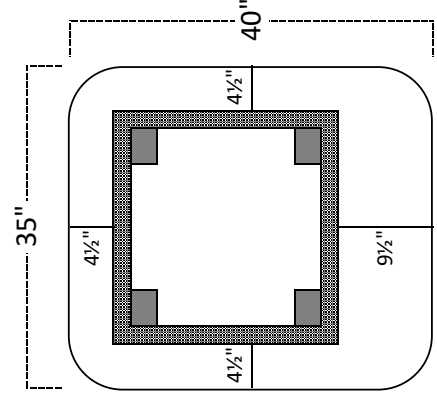
The HOWS Project Dog House Plans



Plywood



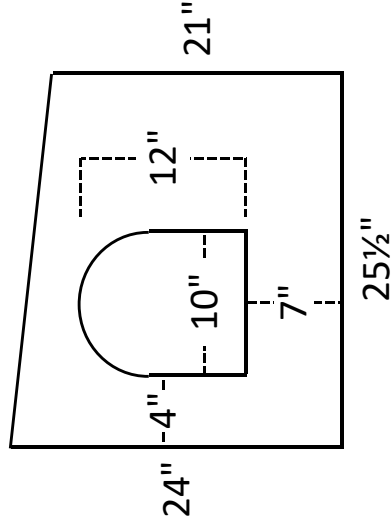
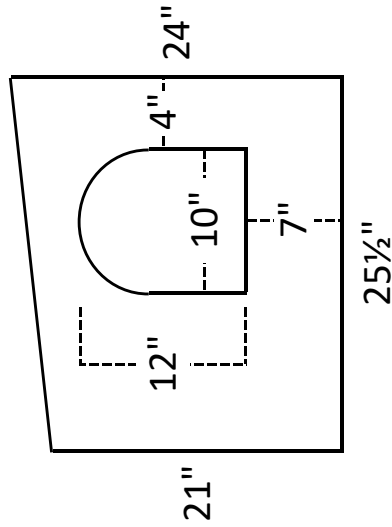
Roof Overhang Measurements (Bird's Eye View)



Entrance Side of the Dog House

SMALL DOG HOUSE FRONT PANEL

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL



MEDIUM DOG HOUSE CUT LIST

MAKES 2 HOUSES

Materials needed:

3 – 4' x 8' sheets of $\frac{3}{4}$ " pressure treated plywood

3 – 2" x 6" x 8' pressure treated

Plywood Cuts

2 – 44" x 48" (roofs)

2 – 28" x 28" (floors)

1 – 28" x 28" (high side)

1 – 20" x 28" (high side A)

1 – 8" x 28" (high side A)

2 – 20" x 28" (low sides A & B)

2 – 4" x 28" (low sides A & B)

4 – 29½" wide, 28" to 24" high (2 fronts and 2 backs)

2" x 6" Cuts

4 – 2" x 6" x 28" (floor runners)

4 – 2" x 2¾" x 25" (braces for the floor)

4 – 2" x 2¾" x 26" (high side braces)

(Length measured from long point of 8° cut to square cut)

4 – 2" x 2¾" x 22" (low side braces)

(Length measured from short point of 8° cut to square cut)

*Please refer to layouts on next page for cutting directions.

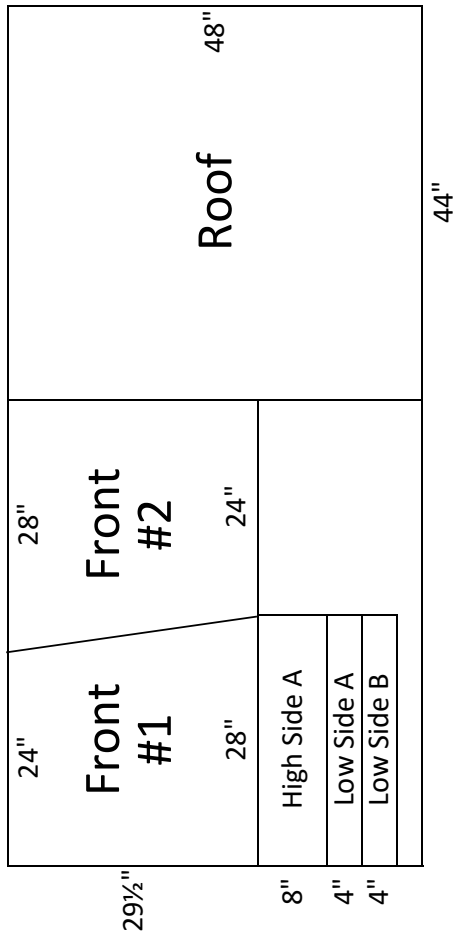
MEDIUM DOG HOUSE LAYOUT

MAKES 2 HOUSES

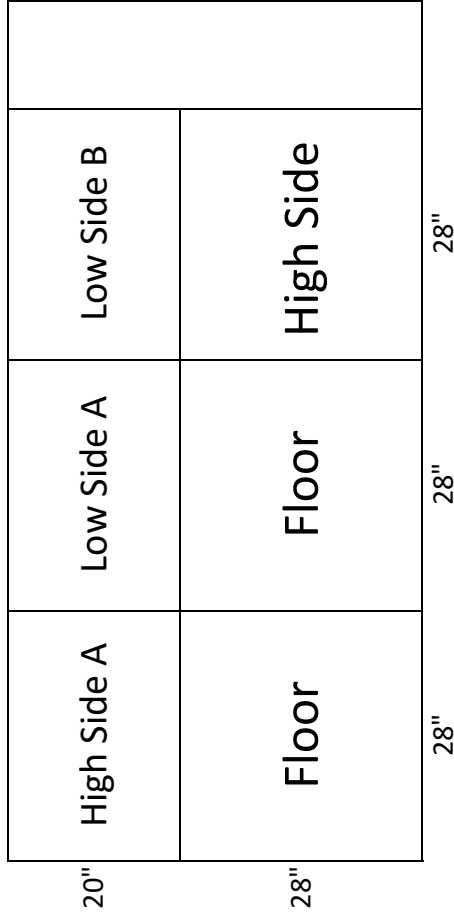


The HOWS Project Dog House Plans

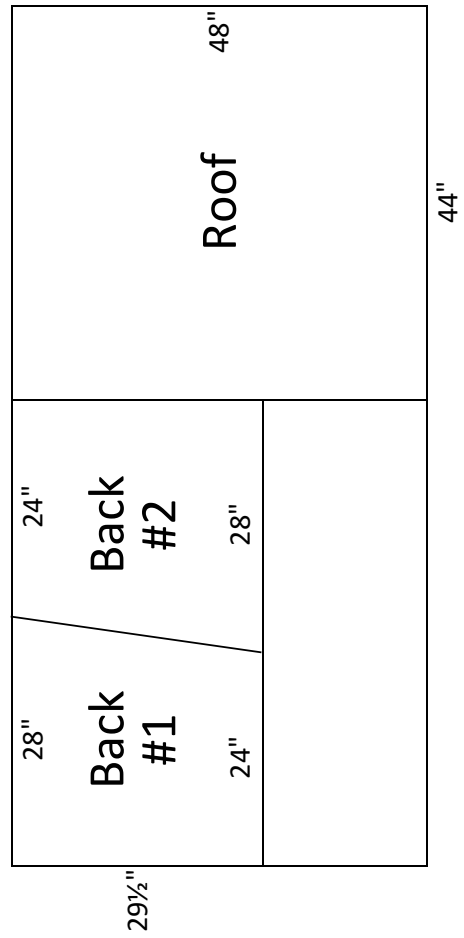
Plywood



Plywood



Plywood



MEDIUM DOG HOUSE LAYOUT

MAKES 2 HOUSES

2" X 6" X 8'



The HOWS Project Dog House Plans

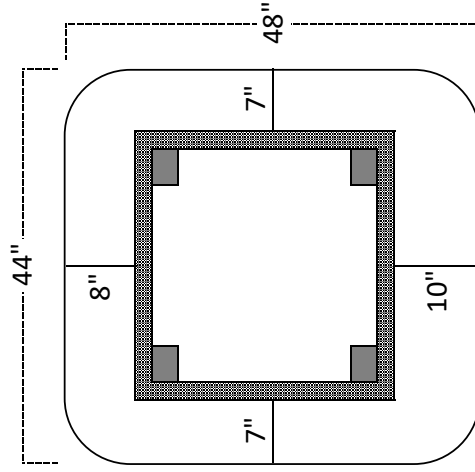
| | | | | |
|--------|--------|--------|-------|--------|
| Runner | Runner | Runner | Cleat | 2 3/4" |
| 28" | 28" | 28" | Cleat | 2 3/4" |
| | | | | 12" |

| | | | | |
|--------|------------|------------|-------|--------|
| Runner | High Brace | High Brace | Cleat | 2 3/4" |
| 28" | High Brace | High Brace | Cleat | 2 3/4" |
| | 27" | 27" | | 14" |

| | | | | |
|-------------|-------------|-----------|-----------|--------|
| Floor Brace | Floor Brace | Low Brace | Low Brace | 2 3/4" |
| Floor Brace | Floor Brace | Low Brace | Low Brace | 2 3/4" |
| 25 1/2" | 25 1/2" | 22 1/2" | 22 1/2" | |

Braces are marked longer to allow for additional cutting.

Roof Overhang Measurements (Bird's Eye View)

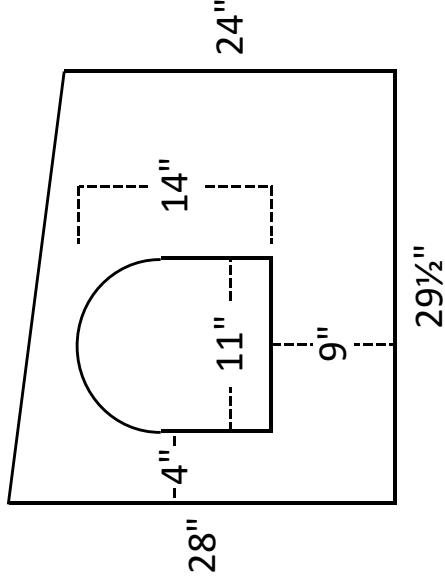
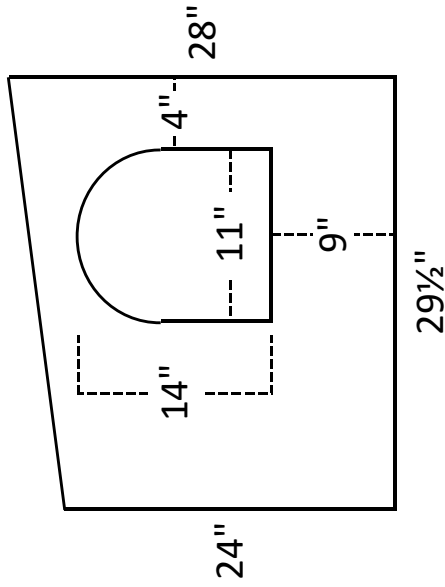


Entrance Side of the Dog House

MEDIUM DOG HOUSE FRONT PANEL

The HOWS Project Dog House Plans

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL



LARGE DOG HOUSE CUT LIST

MAKES 2 HOUSES

Materials needed:

4 – 4' x 8' sheets of $\frac{3}{4}$ " pressure treated plywood

4 – 2" x 6" x 8' pressure treated

Plywood Cuts

2 – 48" x 48" (roofs)

2 – 32" x 32" (floors)

2 – 32" x 32" (high sides)

1 – 16" x 32" (low side A)

1 – 12" x 32" (low side A)

1 – 28" x 32" (low side)

4 – 33½" wide, 32" to 28" high (2 fronts and 2 backs)

2" x 6" Cuts

4 – 2" x 6" x 32" (floor runners)

4 – 2" x 2¾" x 29" (braces for the floor)

4 – 2" x 2¾" x 30" (high side braces)

(Length measured from long point of 7° cut to square cut)

4 – 2" x 2¾" x 26" (low side braces)

(Length measured from short point of 7° cut to square cut)

*Please refer to layouts on next page for cutting directions.

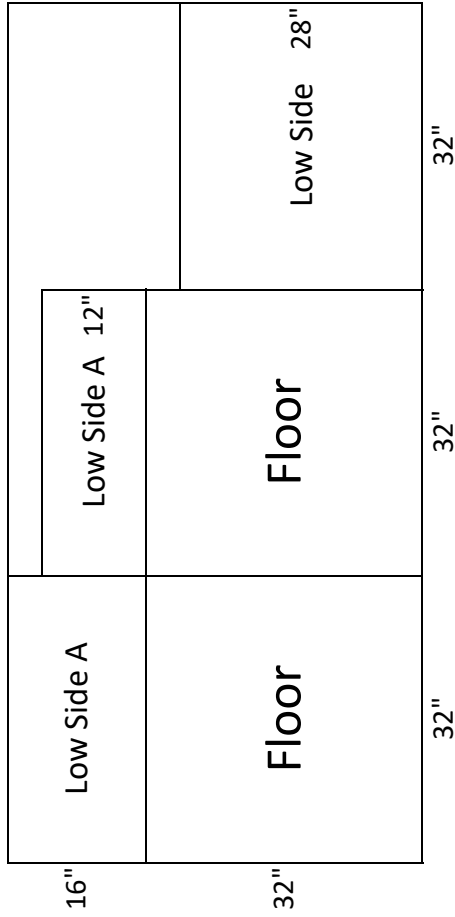
LARGE DOG HOUSE LAYOUT

MAKES 2 HOUSES

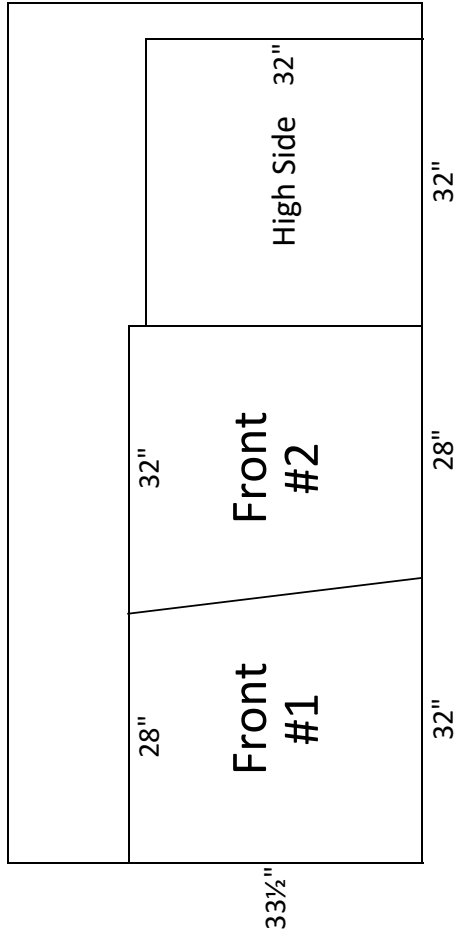


The HOWS Project Dog House Plans

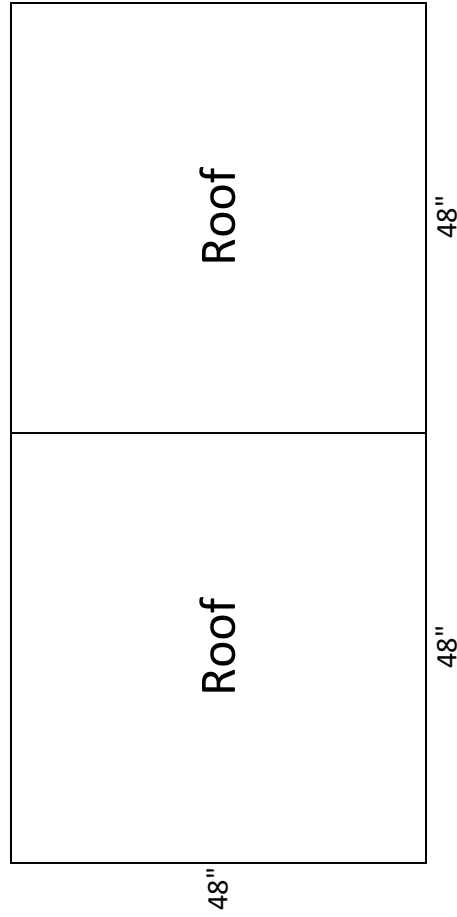
Plywood



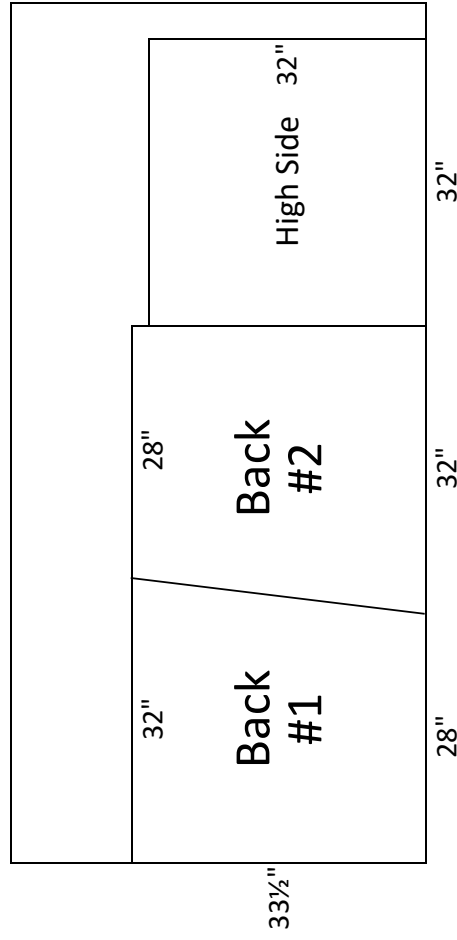
Plywood



Plywood



Plywood



LARGE DOG HOUSE LAYOUT

MAKES 2 HOUSES

2" X 6" X 8"



The HOWS Project Dog House Plans

| | | |
|--------|--------|--------|
| Runner | Runner | Runner |
| 32" | 32" | 32" |

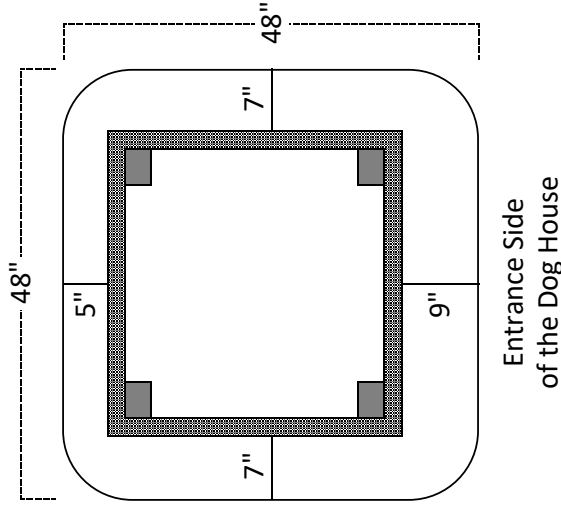
| | | | | |
|--------|-------------|-------------|-------------|--------|
| Runner | Floor Brace | Floor Brace | Floor Brace | 2 3/4" |
| | Floor Brace | Floor Brace | Floor Brace | 2 3/4" |
| 32" | 30" | | 30" | |

| | | | |
|------------|------------|-----------|--------|
| High Brace | High Brace | Low Brace | 2 3/4" |
| High Brace | High Brace | Low Brace | 2 3/4" |
| 31" | 31" | | 27" |

| | | | | | |
|-----------|-------|-------|-------|-------|--------|
| Low Brace | Cleat | Cleat | Cleat | Cleat | 2 3/4" |
| Low Brace | Cleat | Cleat | Cleat | Cleat | 2 3/4" |
| 27" | 8" | 8" | 8" | 8" | 8" |

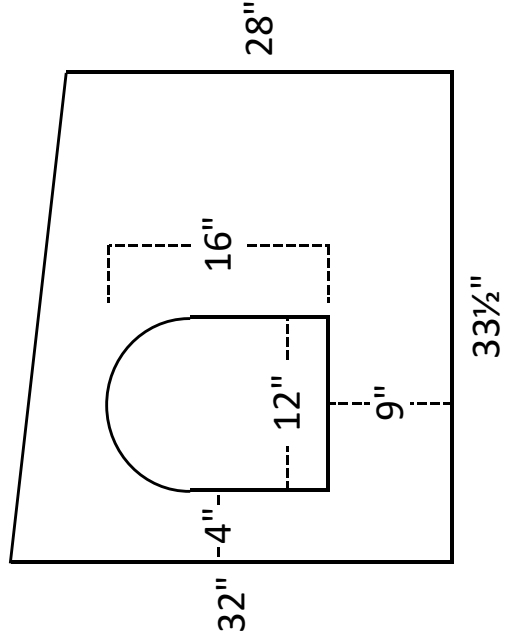
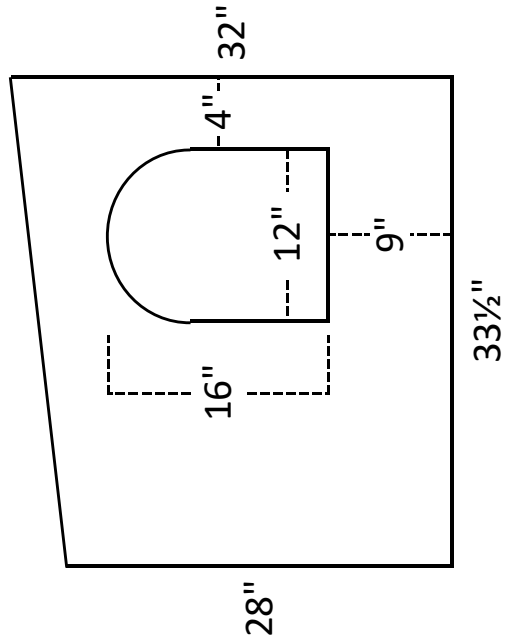
Braces are marked longer to allow for additional cutting.

Roof Overhang Measurements (Bird's Eye View)



LARGE DOG HOUSE FRONT PANEL

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL



EXTRA LARGE DOG HOUSE CUT LIST

MAKES 2 HOUSES

Materials needed:

5 – 4' x 8' sheets of $\frac{3}{4}$ " pressure treated plywood

2 – 2" x 6" x 8' pressure treated

2 – 2" x 6" x 10' pressure treated

Plywood Cuts

2 – 48" x 56" (roofs)

2 – 36" x 40" (floors)

2 – 8" x 36" (high sides A & B)

2 – 28" x 36" (high sides A & B)

2 – 32" x 36" (low sides)

4 – 41 $\frac{5}{8}$ " wide, 36" to 32" high (2 fronts and 2 backs)

2" x 6" Cuts

4 – 2" x 6" x 40" (floor runners)

4 – 2" x 2 $\frac{3}{4}$ " x 33" (braces for the floor)

4 – 2" x 2 $\frac{3}{4}$ " x 34" (high side braces)

(Length measured from long point of 6° cut to square cut)

4 – 2" x 2 $\frac{3}{4}$ " x 30" (low side braces)

(Length measured from short point of 6° cut to square cut)

*Please refer to layouts on next page for cutting directions.

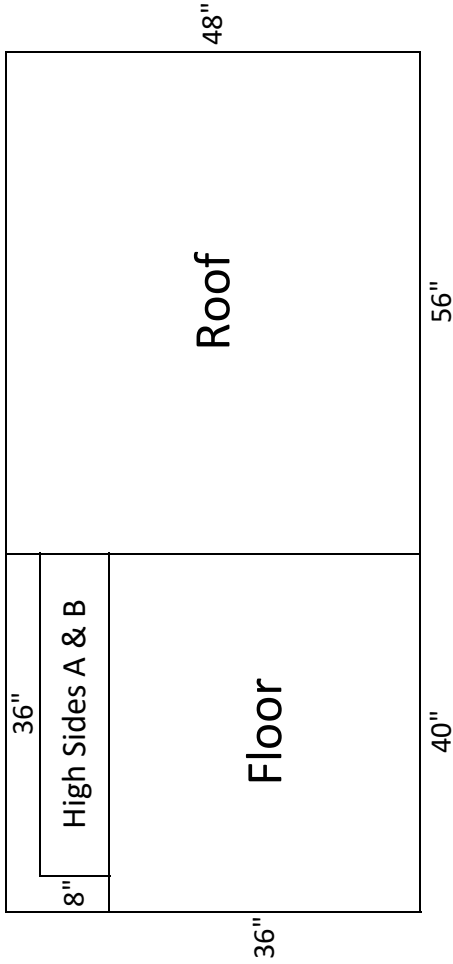
EXTRA LARGE DOG HOUSE LAYOUT

MAKES 2 HOUSES

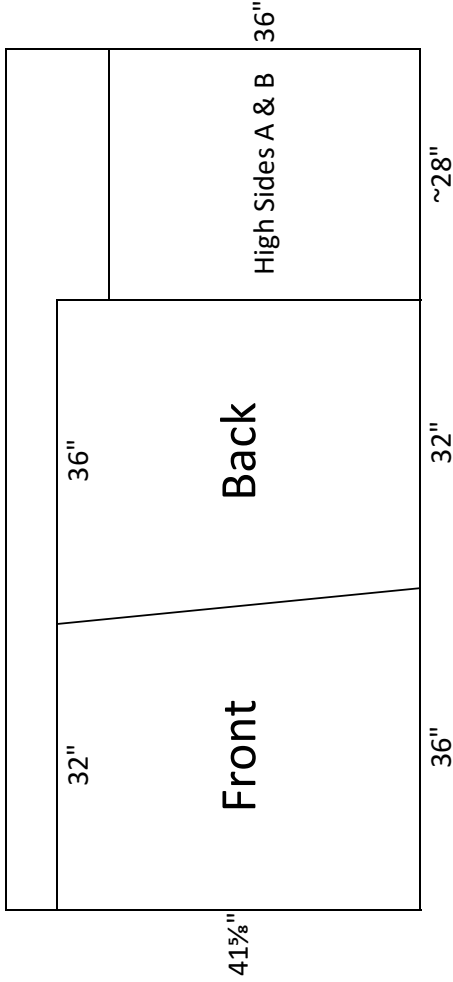
The HOWS Project Dog House Plans



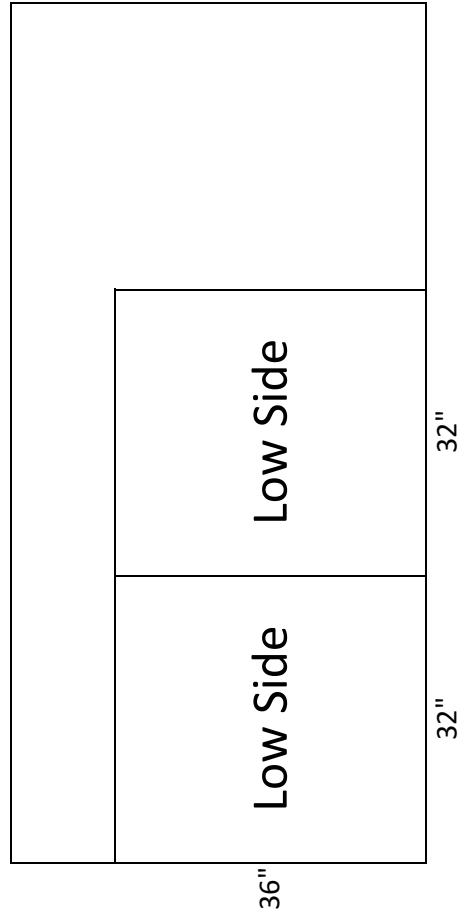
Plywood - Cut two of the below



Plywood - Cut two of the below



Plywood - Cut one of the below

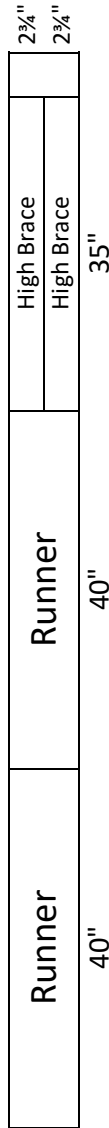


EXTRA LARGE DOG HOUSE LAYOUT

MAKES 2 HOUSES

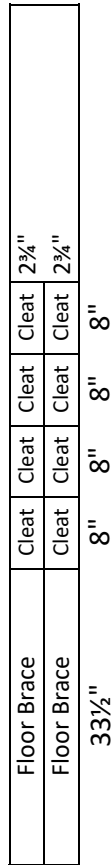
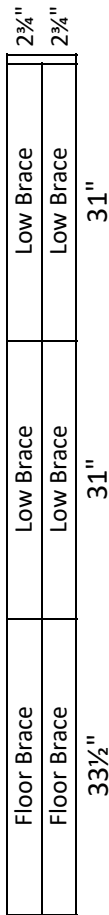
2" x 6" x 10'

Cut two of the below



2" x 6" x 8'

Cut one of each of the below

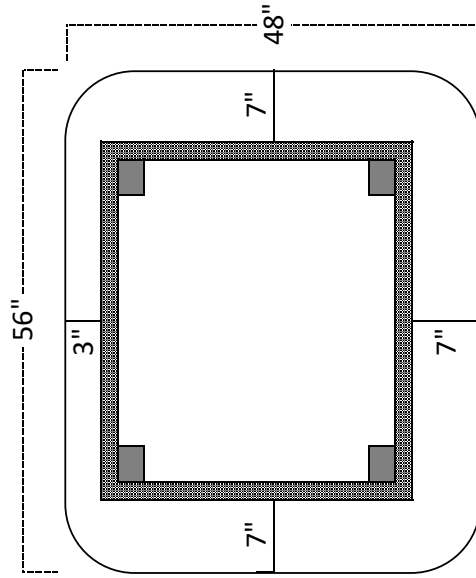


Braces are marked longer to allow for additional cutting.



The HOWS Project Dog House Plans

Roof Overhang
Measurements
(Bird's Eye View)

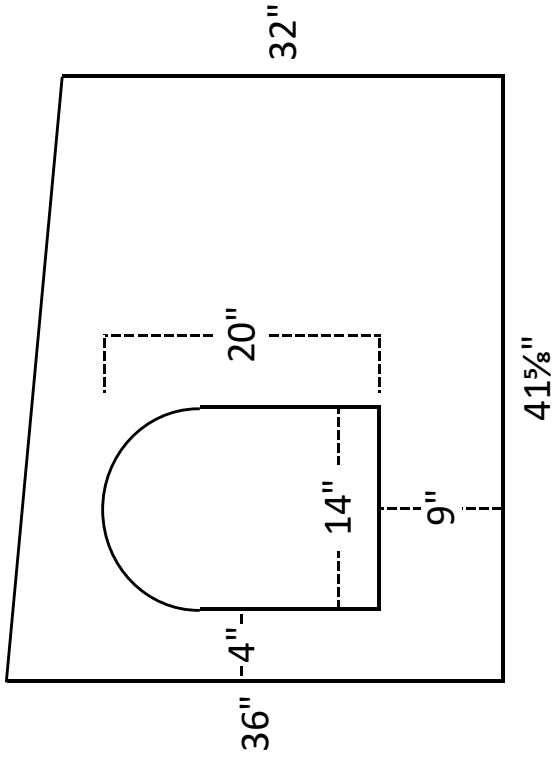
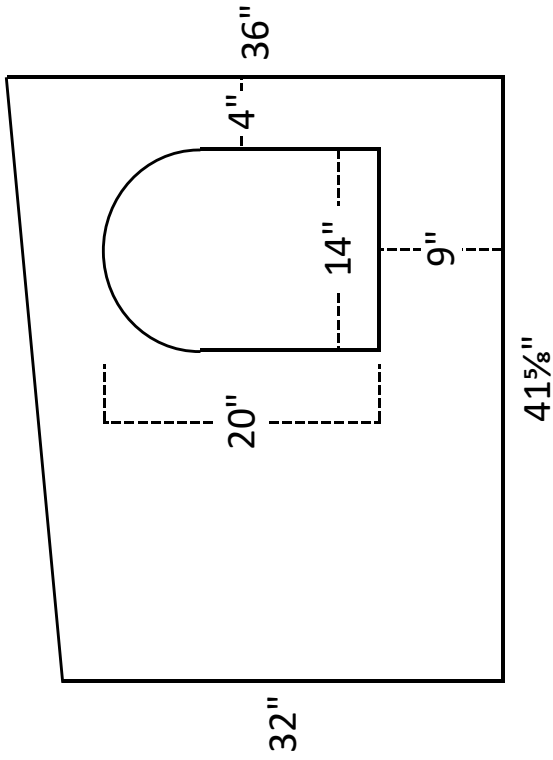


Entrance Side
of the Dog House

EXTRA LARGE DOG HOUSE FRONT PANEL

The HOWS Project Dog House Plans

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL



DOUBLE HOUND DOG HOUSE CUT LIST

MAKES 2 HOUSES

Materials needed:

5 – 4' x 8' sheets of $\frac{3}{4}$ " pressure treated plywood

4 – 2" x 6" x 8' pressure treated

Plywood Cuts

2 – 48" x 60" (roofs)

2 – 36" x 46 $\frac{3}{8}$ " (floors)

2 – 34 $\frac{5}{8}$ " x 36" (high sides)

2 – 30 $\frac{5}{8}$ " x 36" (low sides)

4 – 48" wide, 34 $\frac{5}{8}$ " to 30 $\frac{5}{8}$ " high (2 fronts and 2 backs)

2" x 6" Cuts

4 – 2" x 6" x 46 $\frac{3}{8}$ " (floor runners)

4 – 2" x 2 $\frac{3}{4}$ " x 33" (braces for the floor)

4 – 2" x 2 $\frac{3}{4}$ " x 32 $\frac{5}{8}$ " (high side braces, long point)

(Length measured from long point of 5° cut to square cut)

4 – 2" x 2 $\frac{3}{4}$ " x 28 $\frac{5}{8}$ " (low side braces, short point)

(Length measured from short point of 5° cut to square cut)

*Please refer to layouts on next page for cutting directions.

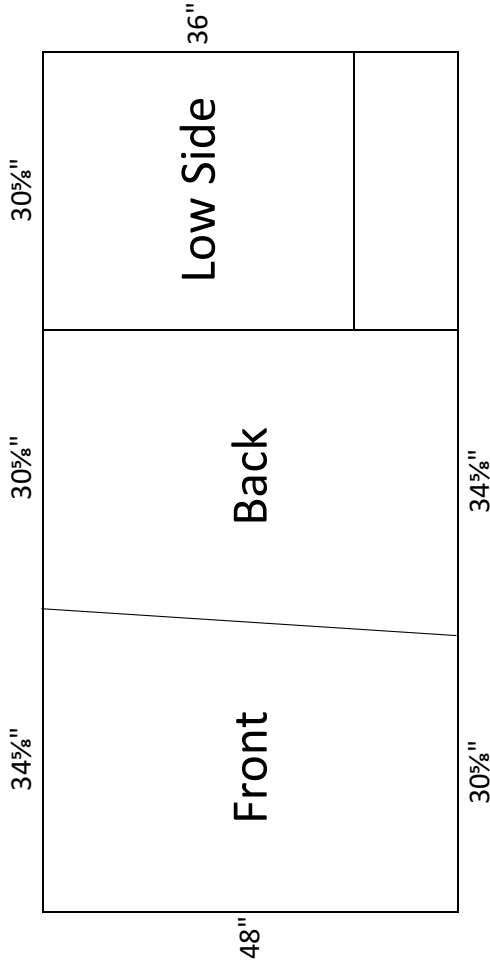
DOUBLE HOUND DOG HOUSE LAYOUT

MAKES 2 HOUSES

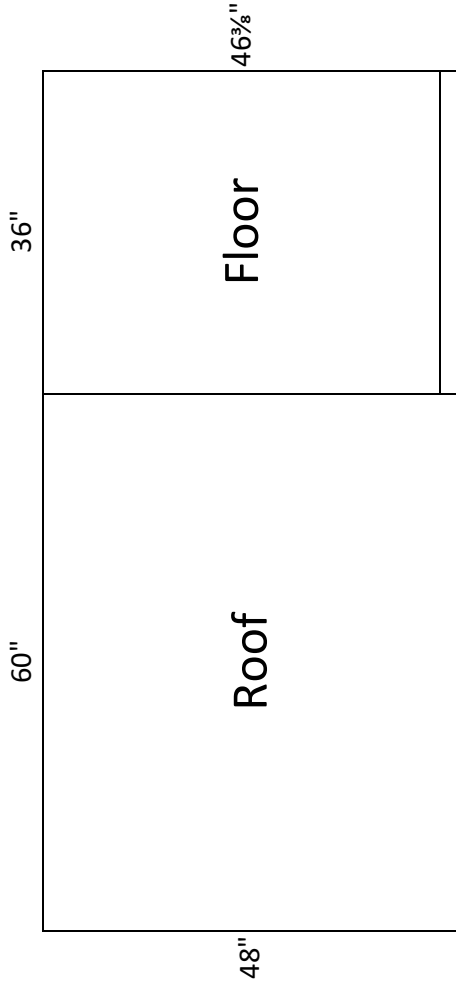
The HOWS Project Dog House Plans



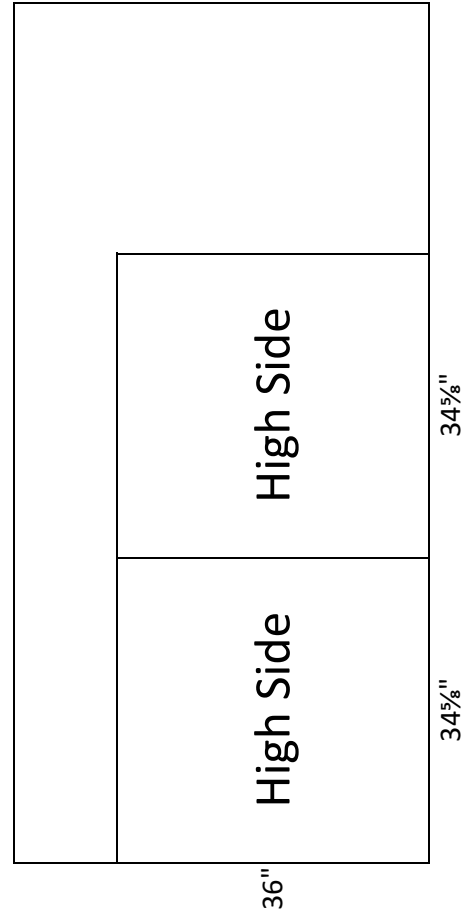
Plywood - Cut two of the below



Plywood - Cut two of the below



Plywood - Cut one of the below



DOUBLE HOUND DOG HOUSE LAYOUT

MAKES 2 HOUSES



The HOWS Project Dog House Plans

2" x 6" x 8'

Cut two of the below

| | |
|----------------------------------|----------------------------------|
| Runner | Runner |
| 46 ³ / ₈ " | 46 ³ / ₈ " |

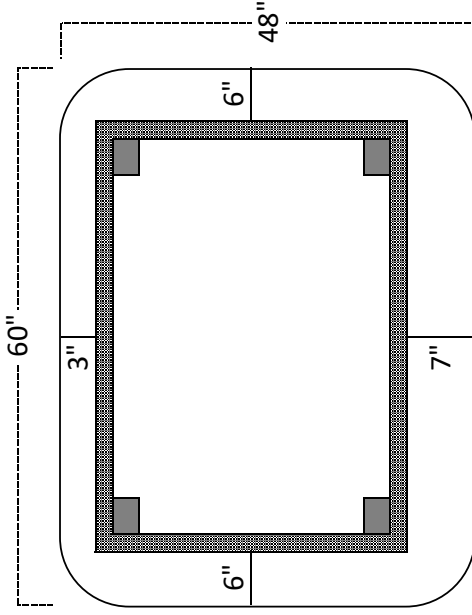
Cut one of each of the below

| | | | |
|-------------|-------------|----------------------------------|---------------------------------|
| Floor Brace | Floor Brace | Low Brace | 2 ³ / ₄ " |
| Floor Brace | Floor Brace | Low Brace | 2 ³ / ₄ " |
| 33" | 33" | 29 ¹ / ₄ " | |

| | | | |
|------------|------------|----------------------------------|---------------------------------|
| High Brace | High Brace | Low Brace | 2 ³ / ₄ " |
| High Brace | High Brace | Low Brace | 2 ³ / ₄ " |
| 33" | 33" | 29 ¹ / ₄ " | |

Braces are marked longer to allow for additional cutting.

Roof Overhang Measurements (Bird's Eye View)

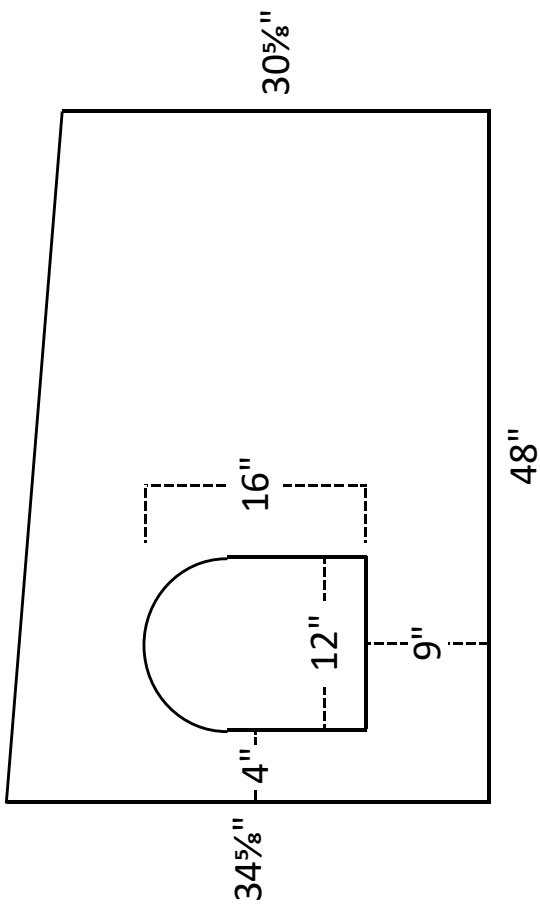
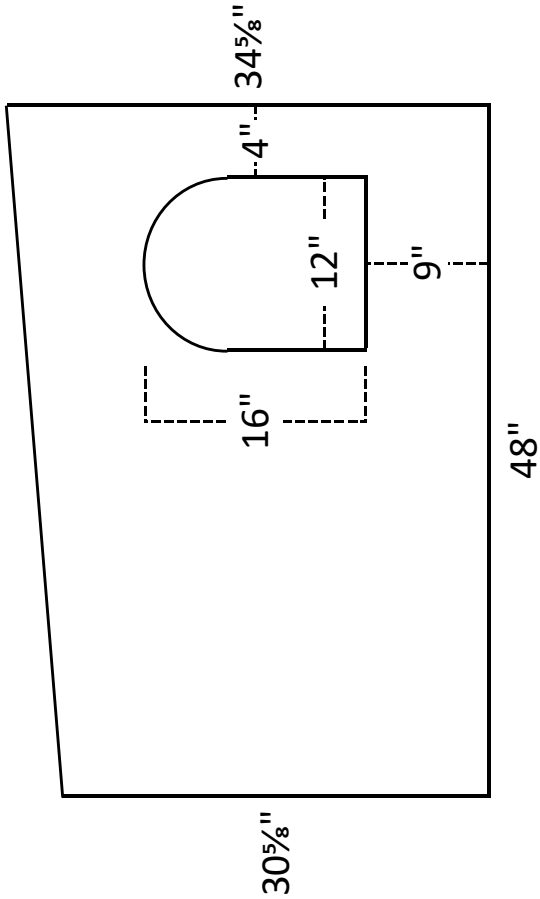


Entrance Side of the Dog House

DOUBLE HOUND DOG HOUSE FRONT PANEL

The HOWS Project Dog House Plans

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL



DOG HOUSE MEASUREMENTS (inches)

The HOWS Project Dog House Plans

| SIZE | FLOOR | FRONT/BACK* | HIGH SIDE | LOW SIDE | DOOR | ANGLE |
|------------------|----------|------------------|--------------|-------------|-------------|-------|
| SMALL | 24 X 24 | 25½ w X 24-21 h | 24 w X 24 h | 24 w X 21 h | 10 w X 12 h | 7° |
| MEDIUM | 28 X 28 | 29½ w X 28-24 h | 28 w X 28 h | 28 w X 24 h | 11 w X 14 h | 8° |
| LARGE | 32 X 32 | 33½ w X 32-28 h | 32 w X 32 h | 32 w X 28 h | 12 w X 16 h | 7° |
| EXTRA LARGE | 36 X 40 | 41⅝ w X 36-32 h | 36 w X 36 h | 36 w X 32 h | 14 w X 20 h | 6° |
| DOUBLE HOUND DOG | 36 X 46⅝ | 48 w X 34⅝-30⅝ h | 36 w X 34⅝ h | 36 w X 30⅝ | 12 w X 16 h | 5° |

*Fronts and backs should be 1½" wider than floor to allow for the overlap of the low/high sides.

*The slope of the fronts/backs should correspond to the high and low heights for the size of the house.



The HOWS Project Dog House Plans

DOG HOUSE SUPPLY LIST

(Each row makes 2 houses)

| SIZE | 2" X 6" X 8' | 2" X 6" X 10' | ^{3/4"} 4' X 8' PLYWOOD | 3" SCREWS 1 lb | 2" SCREWS 1 lb | 1 1/4" SCREWS 0 | CAULK 3 | VARNISH 1 qt | BRUSHES Yes |
|------------------|--------------|---------------|---------------------------------------|-------------------|-------------------|--------------------|------------|-----------------|----------------|
| SMALL | 2 | 0 | 2 | 1 lb | 1 lb | 0 | 3 | 1 qt | Yes |
| MEDIUM | 3 | 0 | 3 | 1 lb | 1 lb | 30 | 3 | 1 qt | Yes |
| LARGE | 4 | 0 | 4 | 1 lb | 1 lb | 15 | 4 | 1 qt | Yes |
| EXTRA LARGE | 2 | 2 | 5 | 2 lbs | 2 lbs | 30 | 6 | 1 qt | Yes |
| TWO HOUND DOG | 4 | 0 | 5 | 2 lbs | 2 lbs | 0 | 6 | 1 qt | Yes |

All lumber should be pressure treated.



The HOWS Project Dog House Plans





CAT HOUSE AND CONDO CONSTRUCTION MANUAL

The HOWS Project started in 2008. In the first 10 years we delivered over 1,000 dog houses to dogs in need of better shelter. During many of these deliveries we have discovered other animals that are also in such need. We have been able to accommodate many of these animals by modifying our dog houses. With a demand for more cat friendly structures we have developed plans for a single cat house and multi-cat condo.



The basic construction of the two cat structures is similar to that of the dog house. Please refer to the first part of this manual for those details. Additional instructions for the cat structures are in the following text.

The floor for these structures should be attached to one end of each 2" x 6" floor runner. The floor runners will be longer than the floor to accommodate the addition of the porch. A floor brace will be attached to each end of the runner. The third brace will be attached under the edge of the floor and between the floor runners.



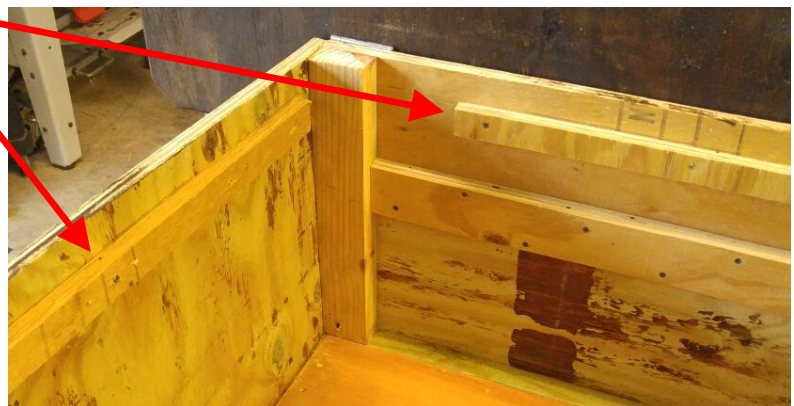
Attach the four corner braces, the low, high and back sides as instructed in the dog house manual.

Before attaching the front side and the porch you will need to cut a notch in the floor runner at the front edge of the floor. The notch should be 1½" deep and 1½" wide. This notch allows the front side to overlap the floor.

The front side can then be attached to the high and low braces and the floor brace near the middle of the structure. The porch will then be attached to the runners in front of the structure. Leave a small space between the house and the porch. This space will allow for drainage. The porch will hang over the runners and the front brace.



Attach a 1½" cleat (strip of plywood) around the perimeter of the inside of the house. The upper edge of the cleat should be 1½" from the top. This additional space will allow for the



placement of an inch thick piece of foam board insulation. This can be removed in warmer weather.



Another piece of the foam board should be attached under the house and held in place with cleats. This insulation should remain in place.

With the top or best side of the roof facing down on the ground, place the house/condo upside down on the roof. Refer to page 40 for the single cat house and page 43 for the multi-cat condo for the proper placements.

Attach the 2 three inch hinges on to the lower side of the house and to the roof.



The safety hasp should be attached to the roof on the higher side of the house in the center. Use a snap to keep the hasp closed.



For the multi-cat condo one may want to attach a gate latch to the lower back corner of the house and a "U" bolt to the corresponding corner of the roof. This will allow you to safely hook the roof in the open position when needed.





CAT HOUSE FINAL CHECK LIST

1. Please remove any screws that are exposed inside the cat house.
2. Please remove any staples from the edges of the plywood and ends of the lumber.
3. Caulk any areas/seams that may allow cold air and rain into the structure.
4. Please sand any sharp/rough edges. Don't forget the doorway. Please round the edges of the roof and front porch.
5. Spar varnish/water sealant should be applied to the top and bottom of the floor system and the roof. Exterior walls can also be painted.
6. Please check to see that all hardware is attached correctly.
7. Fill the houses with straw in the winter to keep the cats warm. A flexible and waterproof material may also be stapled over the doorway during the winter to keep the wind and cold from inside the shelter.



SINGLE CAT HOUSE CUT LIST

MAKES 1 HOUSE

Materials needed:

- 1 – 4' x 8' sheets of $\frac{3}{4}$ " pressure treated plywood
- 1 – 2" x 6" x 8' pressure treated
- 1 – 2" x 4" x 8' pressure treated
- 1 – 1" x 4' x 8' sheet of foam board insulation

Plywood Cuts

- 1 – 28½" x 35" (roof)
- 2 – 18" x 18" (floor and high side)
- 1 – 18" x 16" (low side)
- 2 – 19½" wide, 18" to 16" high (1 front and 1 back)
- 1 – 8" x 19½" (porch)

2" x 6" and 2"x4" Cuts

- 2 – 2" x 6" x 26" (floor runners)
- 3 – 2" x 4" x 15" (braces for the floor)
- 2 – 2" x 2¾" x 16" (high side braces)
(Length measured from long point of 6° cut to square cut)
- 2 – 2" x 2¾" x 14" (low side braces)
(Length measured from short point of 6° cut to square cut)

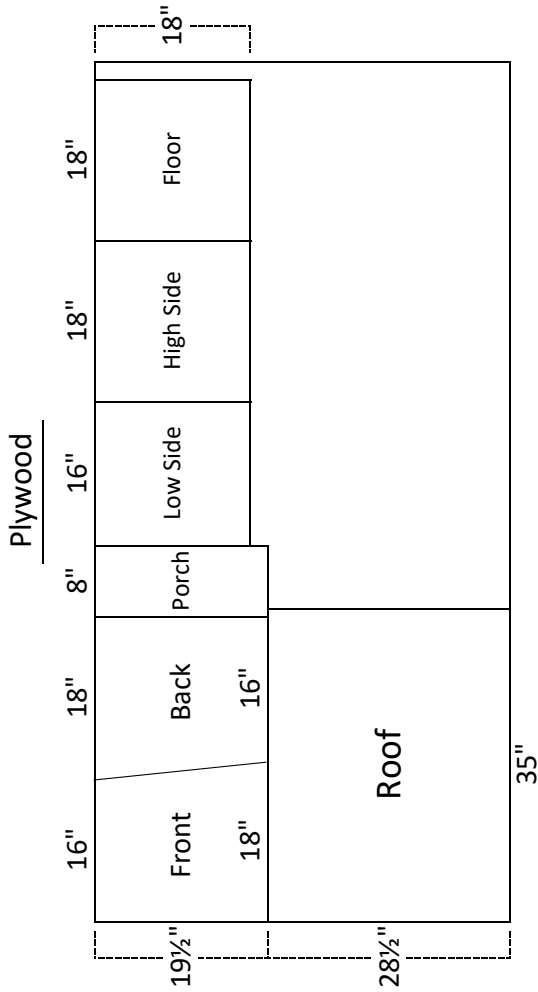
*Please refer to layouts on next page for cutting directions.



The HOWS Project Cat House Plans

SINGLE CAT HOUSE LAYOUT

MAKES 1 HOUSE



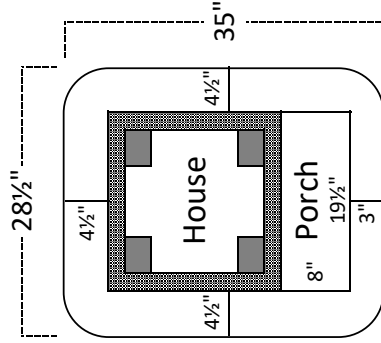
2" x 6" x 8'

| | | | | |
|--------|--------|------------|-----------|--------|
| Runner | Runner | High Brace | Low Brace | 2 3/4" |
| 26" | 26" | High Brace | Low Brace | 2 3/4" |
| | | 17" | 15" | |

2" x 4" x 8'

| | | |
|-------------|-------------|-------------|
| Floor Brace | Floor Brace | Floor Brace |
| 15" | 15" | 15" |

Roof Overhang Measurements (Bird's Eye View)

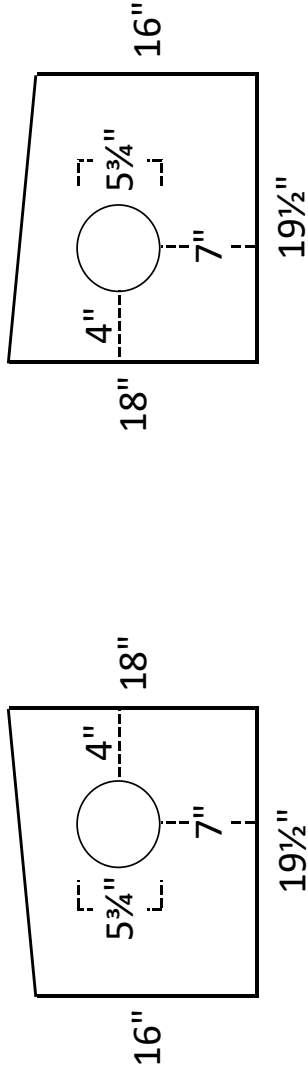


Entrance Side of the Cat House

Braces are marked longer to allow for additional cutting.

SINGLE CAT HOUSE FRONT PANEL

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL



MULTI-CAT CONDO CUT LIST

MAKES 1 CONDO

Materials needed:

2 – 4' x 8' sheets of ¾" pressure treated plywood

1 – 2" x 6" x 8' pressure treated

2 – 2" x 4" x 8' pressure treated

1 – 1" x 4' x 8' sheet of foam insulation

Plywood Cuts

1 – 48" x 48" (roof)

1 – 32" x 34" (floor)

1 – 32" X 22" (high side)

1 – 32" x 18" (low side)

2 – 35⅝" wide, 22" to 18" high (1 front and 1 back)

1 – 8" x 35⅝" (porch)

2" x 6" and 2"x 4" Cuts

2 – 2" x 6" x 40" (floor runners)

3 – 2" x 4" x 29" (braces for the floor)

2 – 2" x 4" x 20" (high side braces)

(Length measured from long point of 6° cut to square cut)

2 – 2" x 4" x 16" (low side braces)

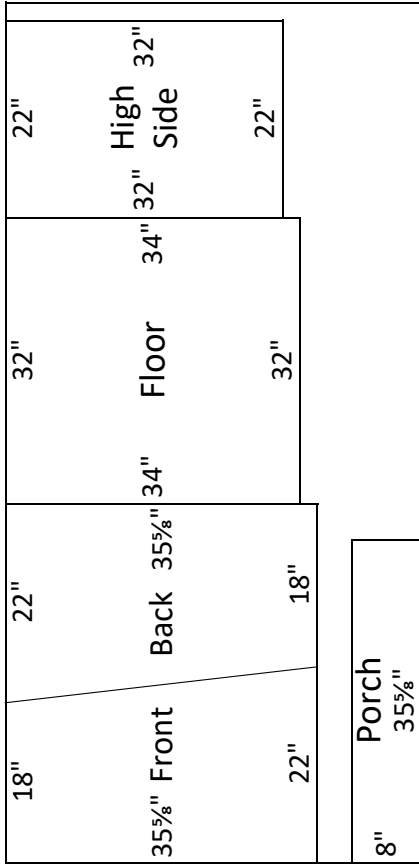
(Length measured from short point of 6° cut to square cut)

*Please refer to layouts on next page for cutting directions.

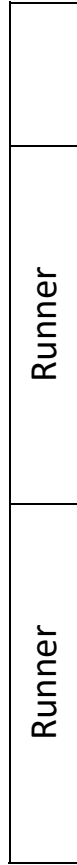
MULTI-CAT CONDO LAYOUT

MAKES 1 HOUSE

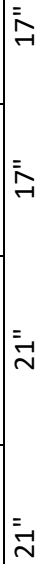
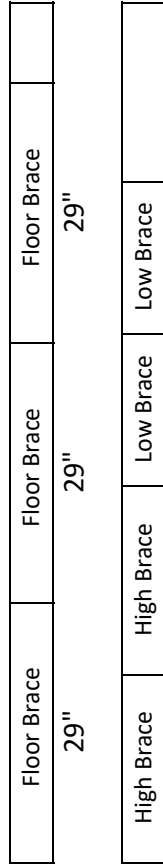
Plywood



2" x 6" x 8'



2" x 4" x 8'

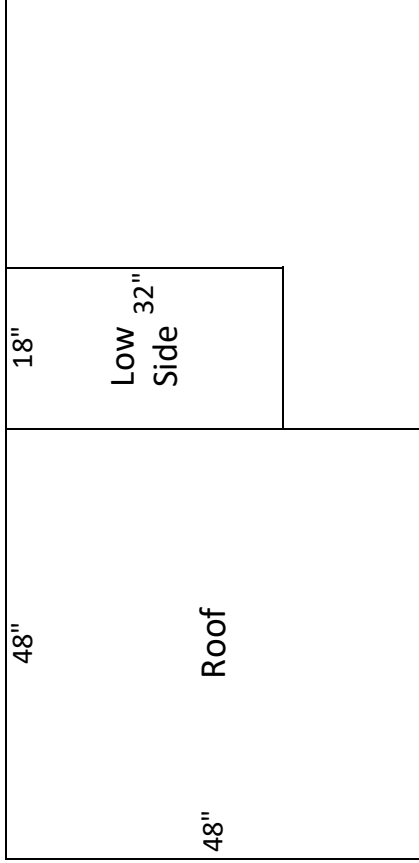


Braces are marked longer to allow for additional cutting.

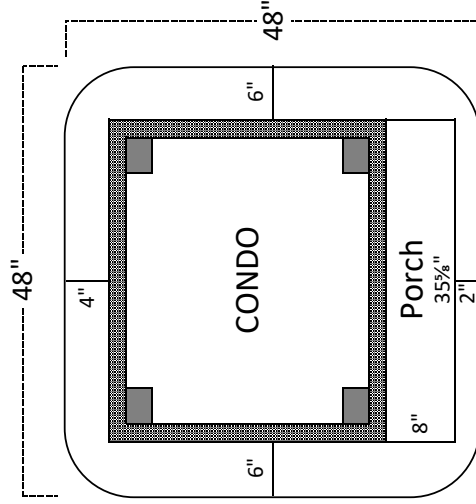
The HOWS Project Cat House Plans



Plywood



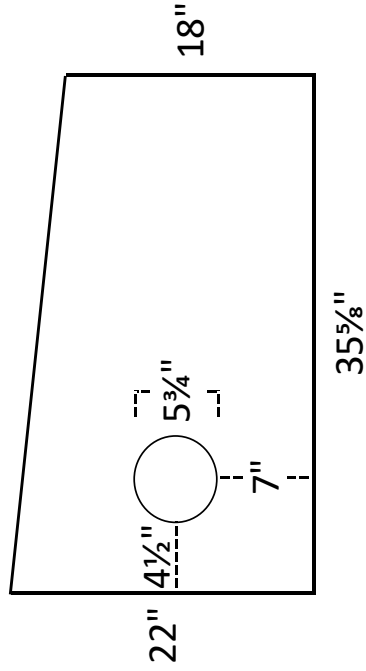
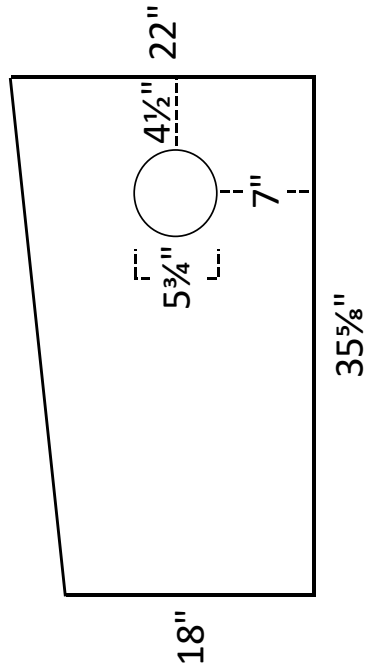
Roof Overhang Measurements (Bird's Eye View)



Entrance Side of the Cat Condo

MULTI-CAT HOUSE FRONT PANEL

Door can be on the right or the left as long as it is on the high side



DOOR GOES ON THE HIGH SIDE OF THE FRONT PANEL

CAT HOUSE MEASUREMENTS (inches)



The HOWS Project Cat House Plans

| SIZE | FLOOR | FRONT/BACK* | HIGH SIDE | LOW SIDE | PORCH | DOOR | ANGLE |
|--------------------|----------------|----------------|-------------|-------------|----------------|-------------|-------|
| SINGLE CAT | 18 w X 18 long | 19½ w, 18-16 h | 18 w X 18 h | 18 w X 16 h | 8 w X 19½ long | 5¾ diameter | 6° |
| MULTI-CAT CONDO | 32 w X 34 long | 35⅝ w, 22-18 h | 32 w X 22 h | 32 w X 18 h | 8 w X 35⅝ long | 5¾ diameter | 6° |

*Fronts and backs should be 1½" wider than floor to allow for the overlap of the low/high sides.

*The slope of the fronts/backs should correspond to the high and low heights for the size of the house.



The HOWS Project Cat House Plans

CAT HOUSE SUPPLY LIST

(Each row makes 1 house)

| SIZE | 2" X 6" X 8' | 2" X 4" X 8' | 3/4" 4' X 8' PLYWOOD | 3" SCREWS | 2" SCREWS | 1" X 4' X 8' foam board insulation | 3" HINGES | HASP AND SNAP | 5" GATE LATCH | 2 inch "U" BOLT | CAULK | VARNISH | BRUSHES |
|------------------|--------------|--------------|----------------------|-----------|-----------|------------------------------------|-----------|---------------|---------------|-----------------|-------|---------|---------|
| SINGLE CAT HOUSE | 1 | 1 | 1 | 1 lb | 1 lb | 1 | 2 | 1 | 0 | 0 | 2 | 1 qt | Yes |
| MULTI-CAT CONDO | 1 | 2 | 2 | 1 lb | 1 lb | 1 | 2 | 1 | 1 | 1 | 3 | 1 qt | Yes |

All lumber should be pressure treated.



The HOWS Project Cat House Plans

