

## Bluebird Nest Box Building “Notes”

These instructions are to aid someone who is building a bluebird nest box for the first time. It is presumed that the builder has some basic woodworking experience. I am sure that once you have gone thru the process you may find easier ways to assemble your boxes. But first a few words of caution, the screws holding the door in place, it is very important that these screws be directly opposite each other and perpendicular to the back piece and front piece for the door to work smoothly. We have found the best way to accomplish this is to put the roof on last. Others have put the roof on before the door and were not able to get the screw going thru the front piece perpendicular to the front and door. The result was the door would not open. The design of this box is the result of a “Master” Box Builder’s having taken a few designs and a few suggestion’s and then combining all the best features and suggestions into one box. I know you’ve heard this many times before but, please read thru these instructions before you start.

### Materials:

All of the wood parts except the roof come from 1”x 6” # 2 pine with tight knots. The roof comes from 1”x 8” # 2 pine with tight knots. Cedar can also be used but it is much more expensive and should be pre-drilled before using screws to fasten parts together as dry cedar tends to split easily.

Screws - The screws are coated decking screws, head configuration (slot, square or philips) is your choice. The screw lengths are, 1 ¼ “ for fastening the hole guard piece to the front piece, 2” are used for fastening the side, bottom, back, roof and door and 3” for front piece to door.

### Cutting Pieces:

Note: See plan sheets for piece dimensions, these notes are to help explain in a little more detail any “special” cutting that needs be done that may not be illustrated very well on the plan sheet.

The roof which is cut from a 1”x8” board has one edge cut at a 15 degree angle which will help maintain the roof pitch and allow the roof to fit flush against the back piece.

The side piece and door piece are cut from 1”x6” board with the tops of each piece cut at 15 degree angle.

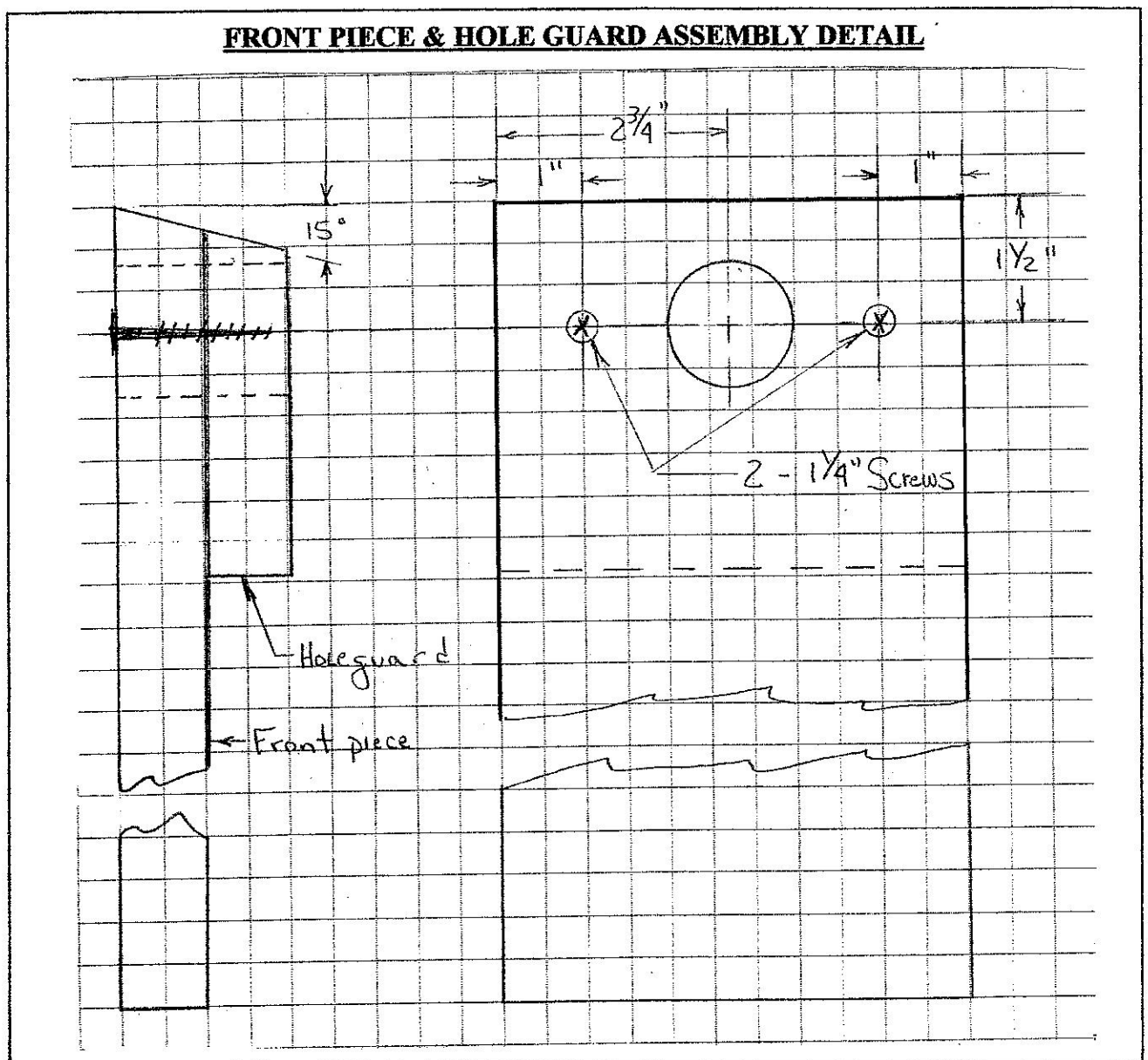
Only the side has 2- ½” vent holes drilled near the top. The center of these vent holes is down about ¾” from the top and the holes are spaced out evenly from front to back.

The front piece and hole guard have their top edges cut at 15 degree angle which will help maintain the roof pitch and allow the roof to fit flush against the tops of the front piece and hole guard. You will cut “saw kerfs” 1/8” deep starting about ¼” below the bottom of the entrance hole and all the way down to about 1½” from the bottom of the front piece. This will be the inside of the front piece. The kerfs are to help the baby birds climb out of the box when ready to fledge. Note the 1 ½” diameter hole entrance is drilled after the hole guard piece and front piece are assembled together.

The floor piece has each corner cut off at a 45 degree angle, back 3/8” from the corners for drainage.

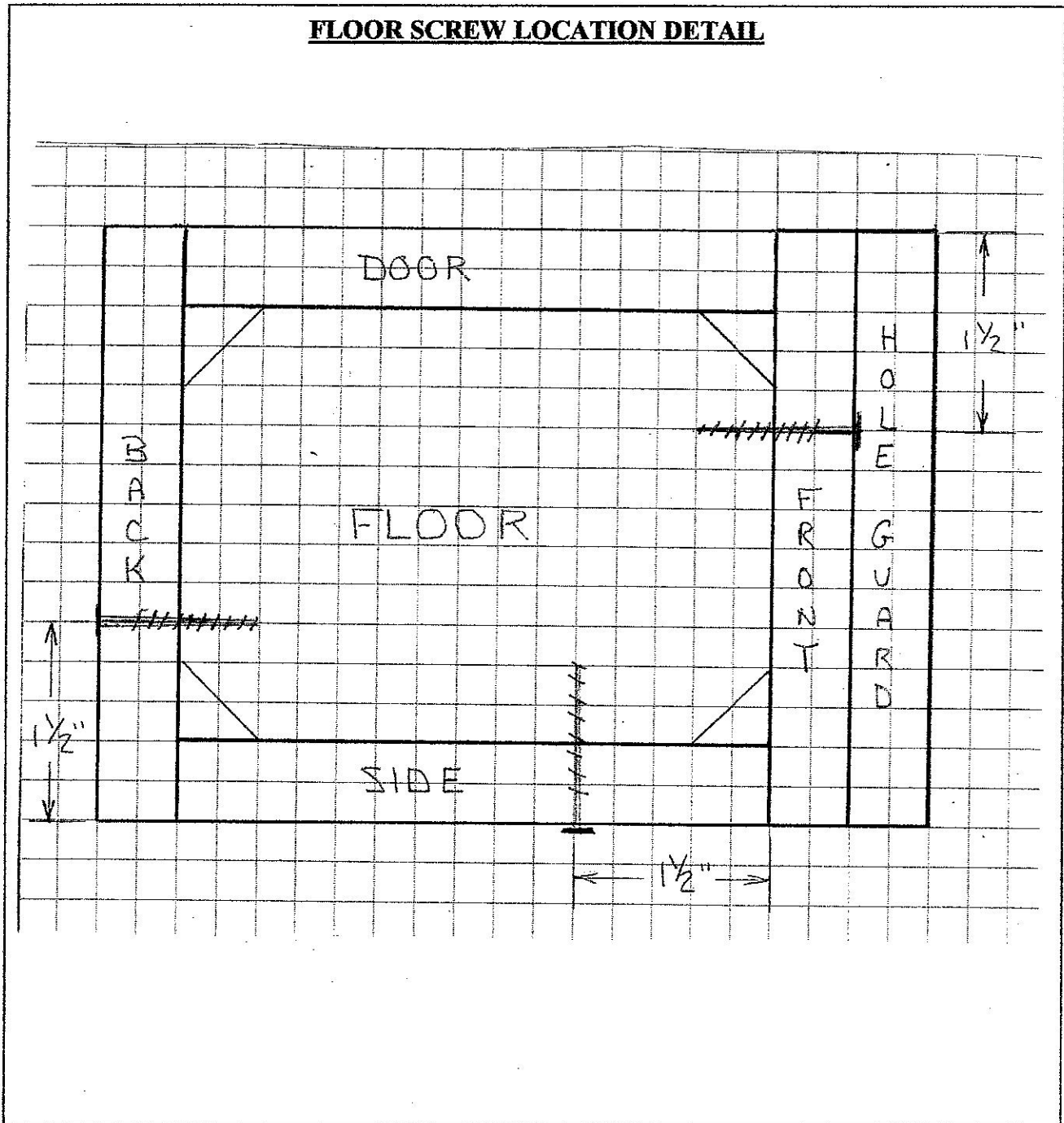
Assembly: You should locate each of the pieces before you assemble them and if you want to sand a rough edge etc. now is the time to do it. Then hold the pieces together to see how they will look when fastened together. This is especially helpful with lining up the tops of the front and hole guard pieces. It is suggested that you mark the screw locations with a pencil dot before you install the screws. If you are not comfortable installing the screws without pre-drilling the holes, then by all means pre-drill your holes. Keep in mind that the inside of your finished nest box **CAN NOT** have the ends of screws sticking thru or sharp wood splinters sticking out.

1. Hole guard piece and front piece - the tops of the hole guard and the front piece are joined so that the top edge is a "continuous" 15 degree angle. See the "Front piece & hole guard assembly detail" for the location of the screws and where to drill the 1 ½ " diameter entrance hole. Fasten the hole guard piece to the front piece with 2- 1 ¼" screws. The screws are fastened thru the front piece into the hole guard piece so that the heads of the screws will be on the inside of the box. Screw tips should not penetrate thru both pieces therefore no screw tips should be visible. Now drill the 1 ½" entry hole thru the joined pieces. After the hole is drilled you should sand any rough or splintered edges.

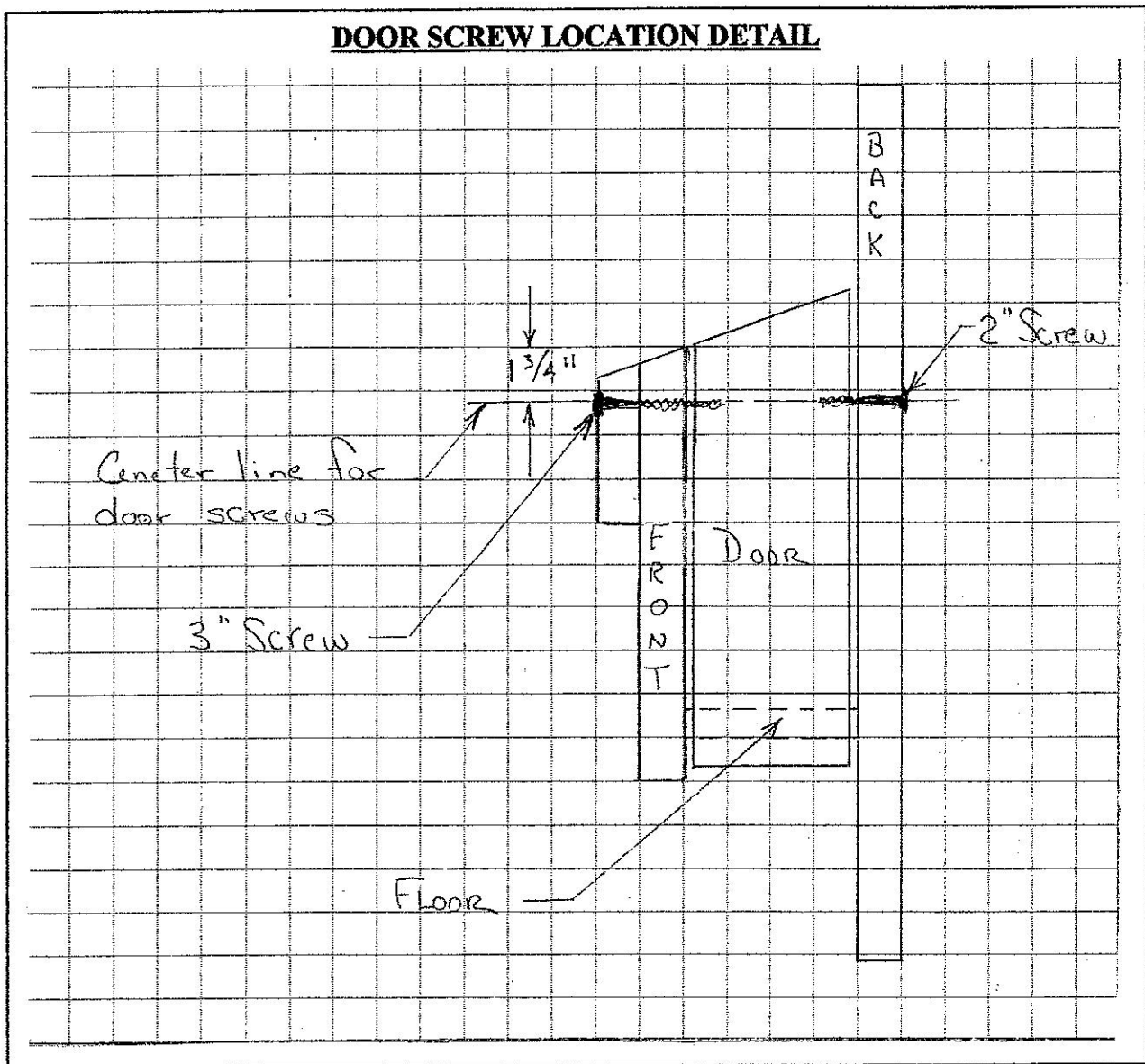


2. Side piece to back piece assembly – the top of the side piece is located down 5" from the top of the back piece. Use 3-2" screws thru the back piece into the sidepiece spaced evenly.
3. Floor piece to side/back assembly - the bottom of the floor piece should be held up about 1/2" from the bottom of the side piece. Fasten it with 1-2" screw thru the side piece about 1-1/2" in from the front edge and 1-2" screw thru the back piece about 1-1/2" in from the side.
4. Front piece to assembled pieces (back, side and floor)- the top of the front piece should be held up to the top of the side piece. This is so that when the roof is installed there will be no gap between the roof and the side. The front is fastened with 2-2" screws spaced evenly below the hole guard into the side and 1-3" screw thru the hole guard/front piece into the side piece. The floor piece gets 1-2" screw thru the front piece approximately in the middle of the front piece.

### FLOOR SCREW LOCATION DETAIL



5. Door "installation"- the top of the door is held down about  $\frac{1}{4}$ " from the top of the front so that when the roof is installed there will be about a  $\frac{1}{4}$ " gap between the door and the roof. The door is fastened with 1- 2" screw thru the back and 1-3" screw thru the hole guard/front. IT IS VERY IMPORTANT that these screws are directly opposite each other and perpendicular with the front and back so that the door will open and close without binding. Locate the screws by measuring down 1-3/4" from back edge of the front piece and putting a pencil mark, then using a square, draw a line thru that mark and all the way over to the back. You will now have a line to use as a guide to install 1-3" screw thru the hole guard/front piece into the door and 1-2" screw thru the back piece into the door. You now have the two screws opposite each other and perpendicular to the door. Do not tighten these screws. This is a very important and "tricky" part of the assembly. Here are a couple of tips that may help. Use a suitable clamp to hold the door in between the front piece and back piece while you draw your pencil line. While the parts are still "clamped" pre drill the screw holes. This should help insure the screws will be directly opposite each other and perpendicular to the front and back pieces.



6. Roof "installation" - attach the roof with the angle cut against the back. Position the roof so that the angle cut that is against the back piece and the bottom of the roof piece that rests on the hole guard/front piece top is as flush and gap free as possible. The roof should fit tight to the top of the side piece. The gap between the bottom of the roof and the door should be an "even" gap from front to back. Fasten the roof with 2-2" screws thru the back piece (angle then down so they stay in the center of the roof) and 2-2" screws thru the top of roof down into the front piece. This should complete the assembly.

#### Finishing Up:

Check the door for smooth opening and closing. Adjust, as needed using the two screws holding the door in place. If need be remove the door and plane it down a little, keep in mind if the door binds even a little when the wood is dry it will bind a lot when the wood is wet. You need to be able to open and close the door with ease when you are monitoring the boxes.

To keep the door closed the following method is what we use. Put a 1-1/2" Philips head screw centered at the bottom of the door thru the door and screwed into the floor.

A bead of exterior wood glue along the roof to back joint and some glue sealing the two screw tops in the roof will help the roof stand up to the weather a little better.

Designed by:

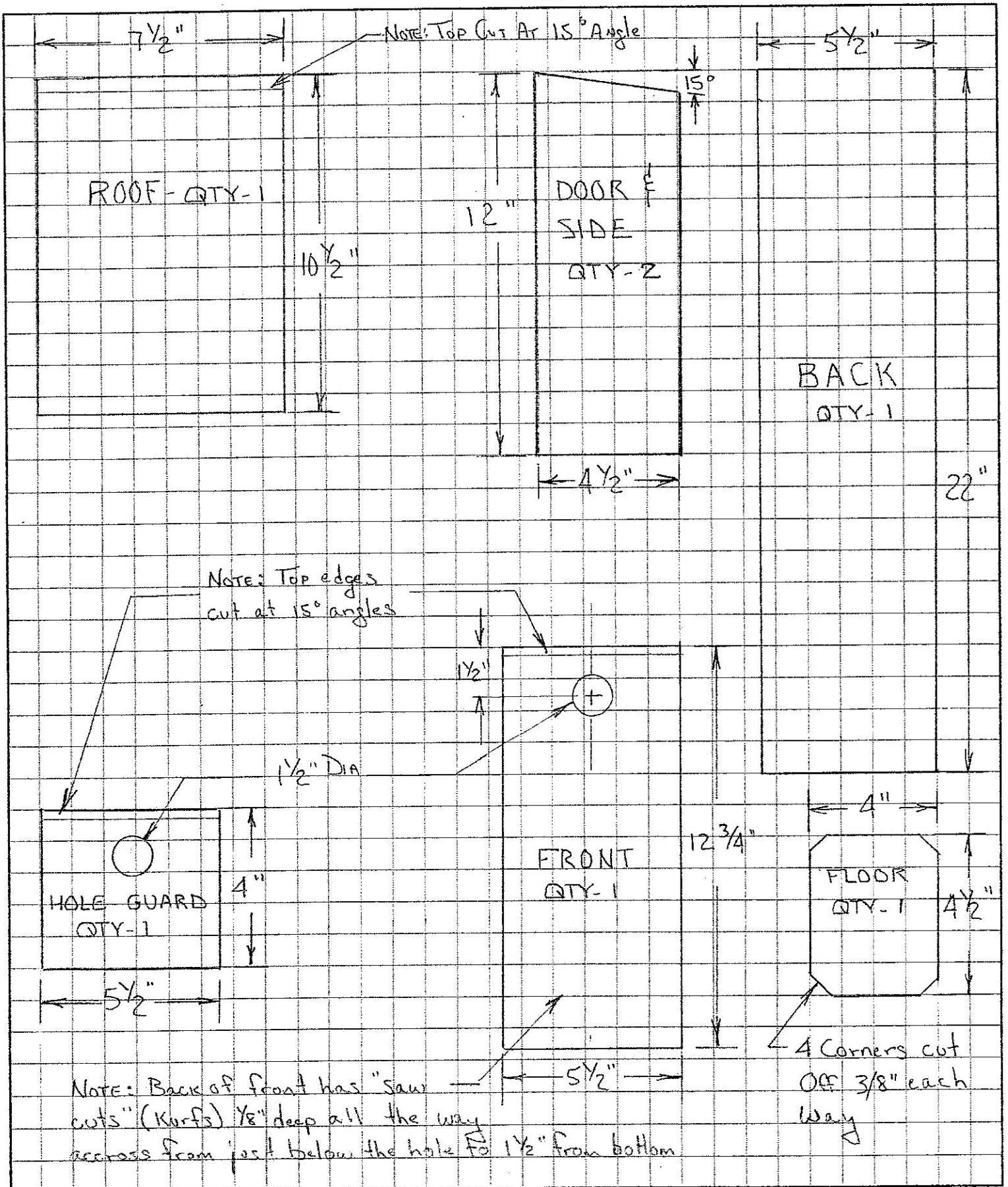
Ralph T. Waterman Bird Club

Bluebird Committee

2013



# Bluebird Nest Box Building Piece Dimension Sheet





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