Barred Owl Nest Box Plan

Dimensions: 18" wide, 19" deep, 24" tall

Materials: ½" treated plywood, 2x2 lumber or baluster, 1 & 5/8" exterior grade screws, liquid nails or waterproof wood glue, stain, 3/8" vinyl-coated wire, thimbles & clamps. Optional: tar paper or roofing shingles, roofing nails or staples

Walls (*Dimensions will vary slightly due to variations in lumber*):

1 front piece – 18" wide by 24" tall, 8" x 8" opening cut before assembly

1 back piece – 18" wide by 19 ¾" tall

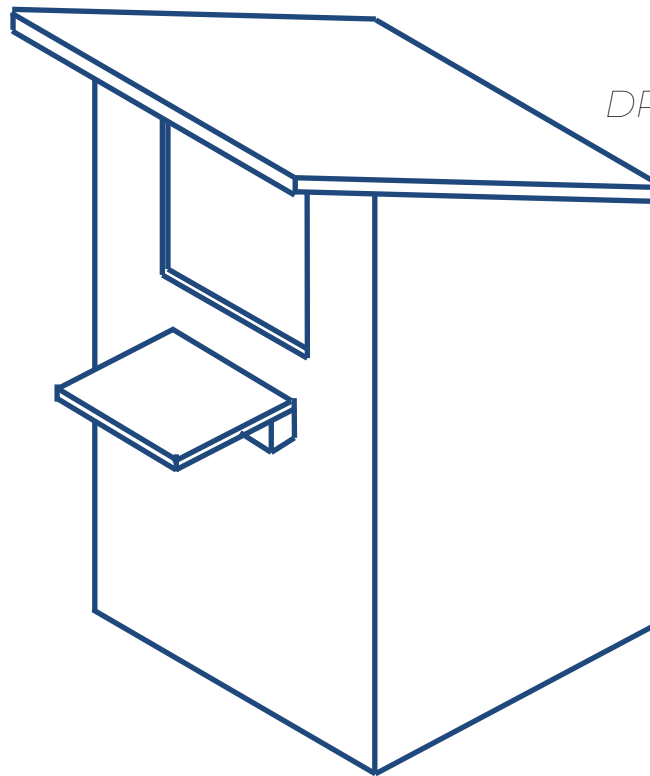1 side pieces, cut with angle – 18" wide, 20" angling up to 24" tall

Floor: 17" x 18" plywood

Roof: 18" wide x 24" long

Interior Framing:

Vertical – 2x2 or baluster (1 & 3/8" x 1 & 3/8"), ~18 ½" and ~22½", 2 each

Floor perimeter – 2x2 or baluster, 18" and ~ 15 ¼", 2 each

DRAWINGS NOT TO SCALE

Before cutting or drilling:

- Always wear protective glasses and work gloves
- Secure lumber to the workbench before cutting

Before assembly:

- It is recommended that all cut edges be lightly sanded to remove splinters
- Dry-fit all pieces before applying glue

During assembly:

- Stager screws along corners to avoid hitting installed screws with a drill bit
- Utilize clamps to align and hold pieces until they are secured with screws

Tools:

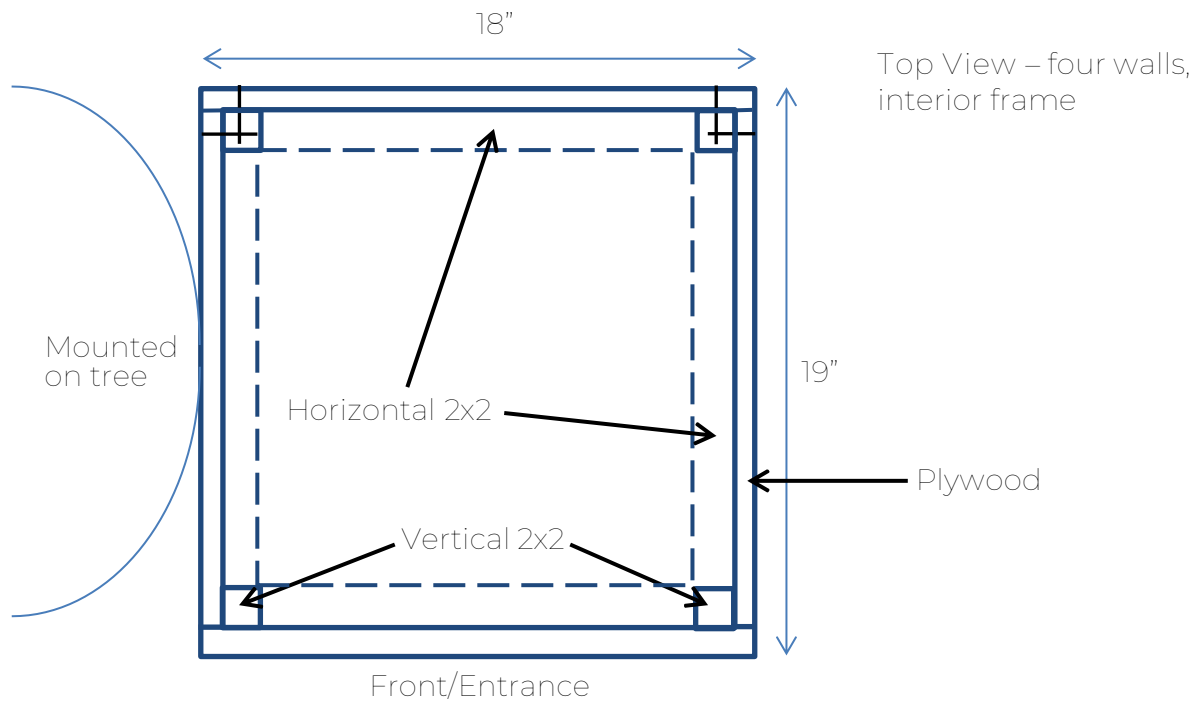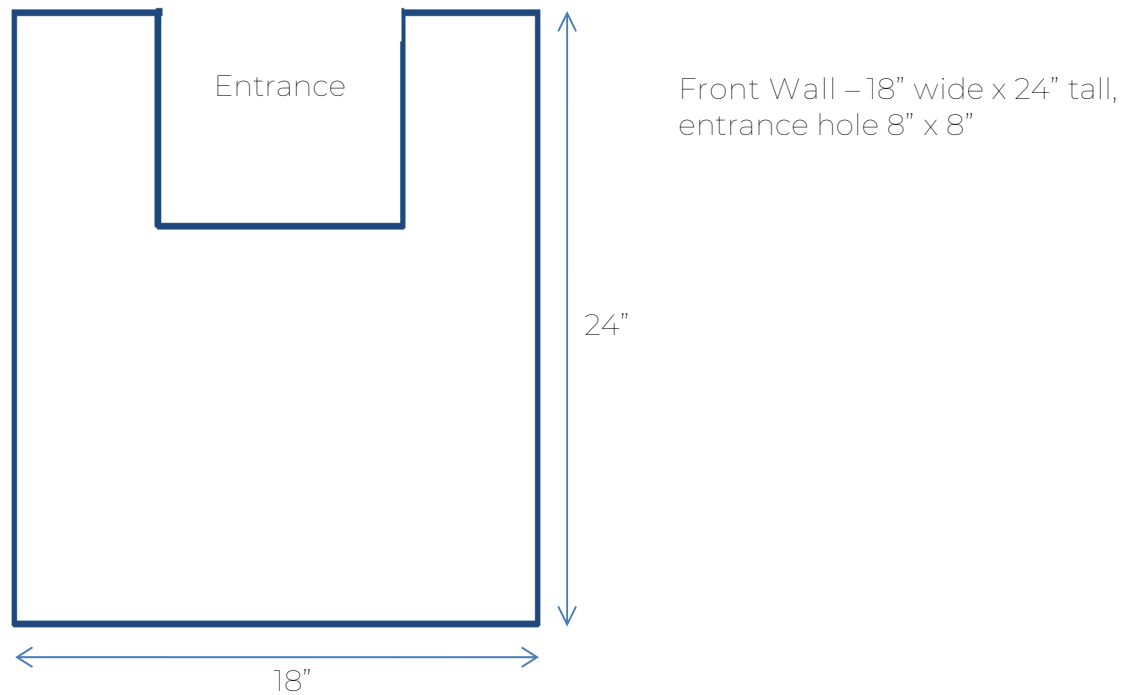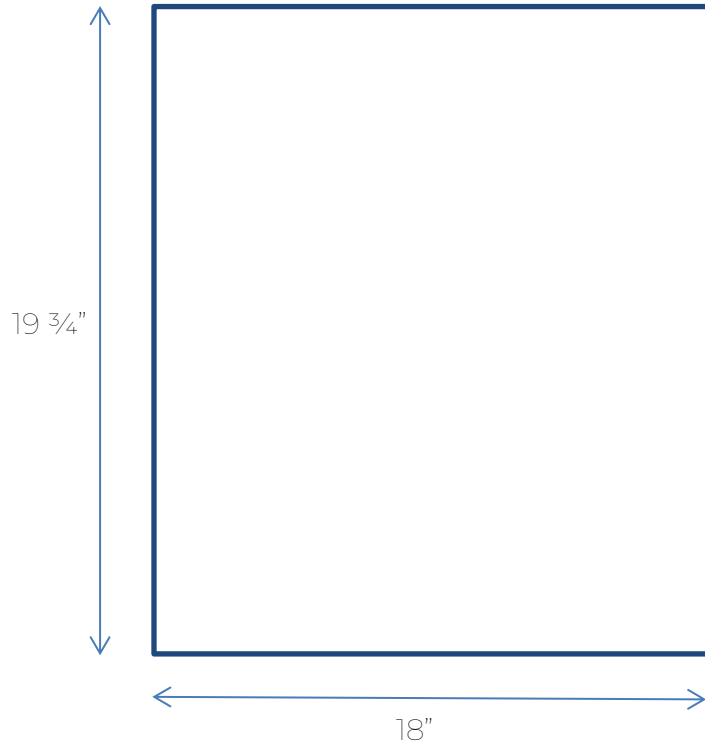|		
Saw	Carpenter's square	Hammer
Drill	Drill bits	Adjustable wrench
Safety goggles	Sandpaper	Ropes
Work gloves	Clamps	Pulley system for hoisting box into place
Tape measure	Caulk gun	
Pencil	Paintbrush	Ladder

18"

Top View – four walls,
interior frame

Mounted
on tree

Horizontal 2x2

19"

Plywood

Vertical 2x2

Front/Entrance

MATERIALS: Cutting guide for plywood pieces

Entrance

Front Wall – 18" wide x 24" tall,
entrance hole 8" x 8"

24"

18"

Back Wall – 18" wide x 19 ¾" tall
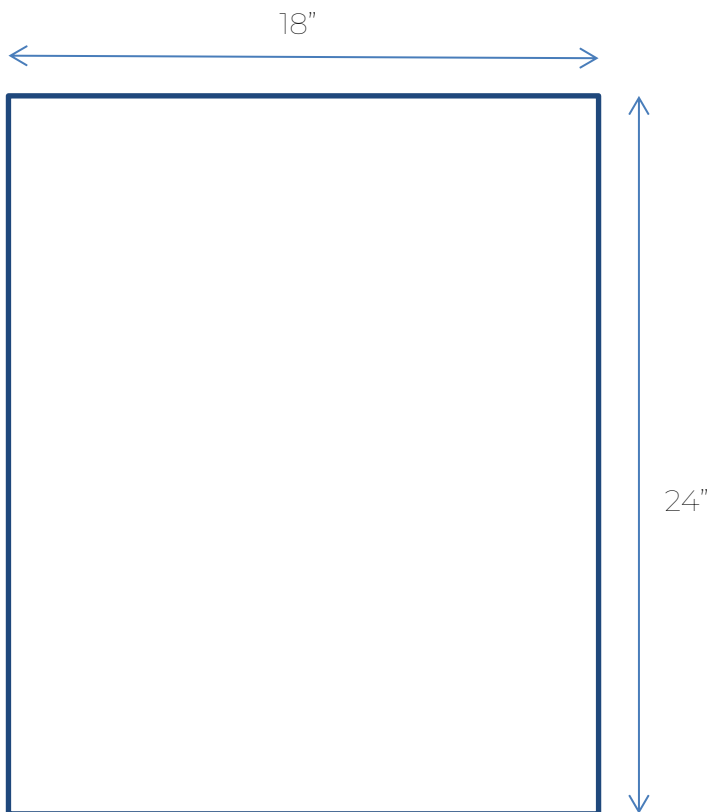
19 ¾"

18"
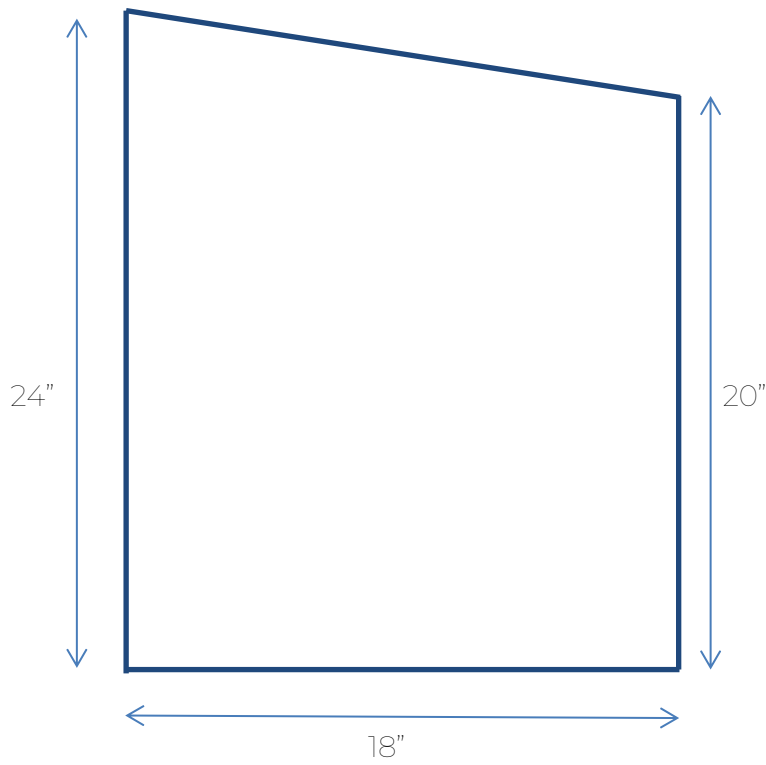
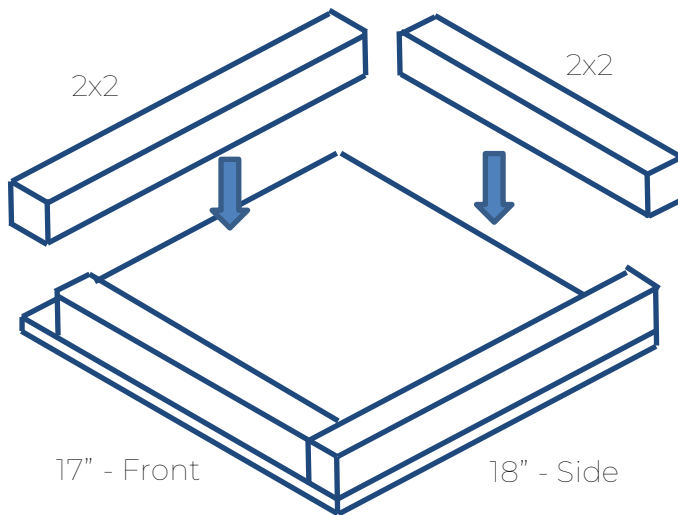Two Side Walls – angled roof

24"

20"

18"

17"

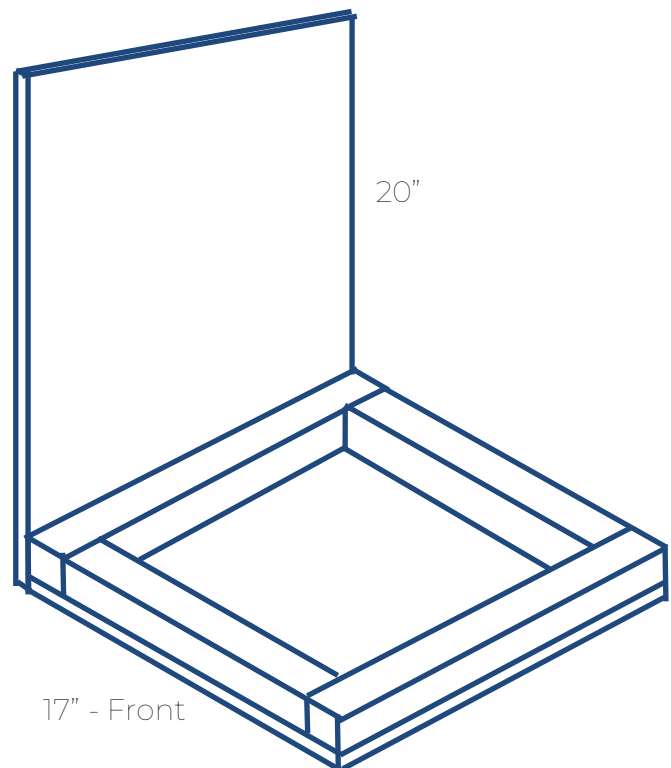Floor – 17" x 18"

18"
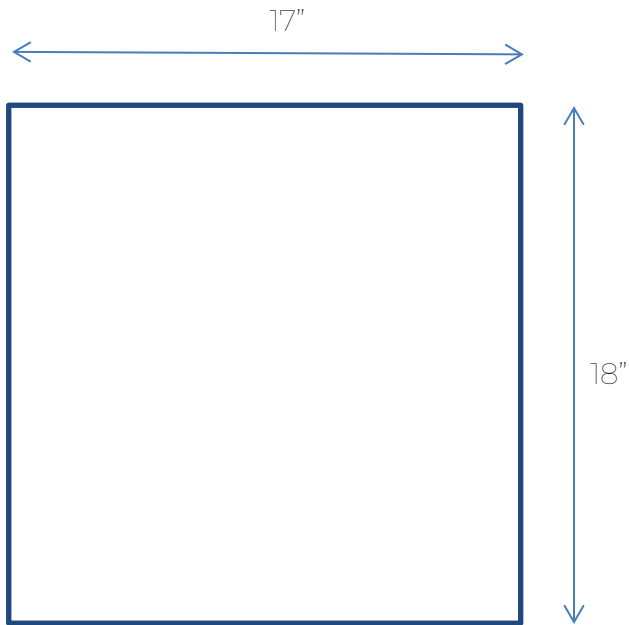
18"

Roof – 18" wide x 24" long

24"

1. Attach four pieces of baluster or 2x2 lumber (18 and ~ 15 &1/4") around the perimeter of floor plywood piece, flush with outer edges – use 1 &5/8" exterior grade screws, 3-4 per side, going from plywood into 2x2. Don't countersink too deep to avoid having sharp points exposed inside the box.
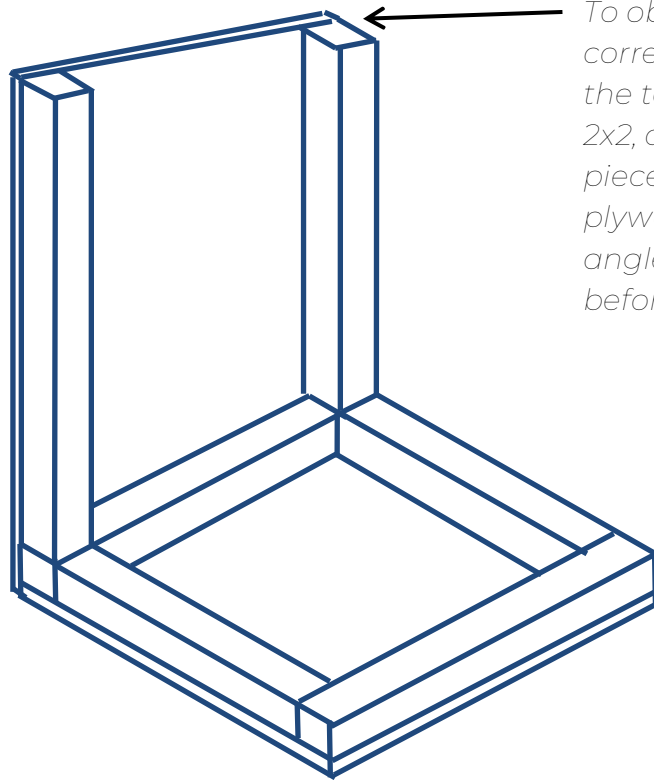
2x2

2x2

FOR BEST RESULTS: Predrill all holes and apply "liquid nails" or quality wood glue to all surfaces before attaching with screws.

17" - Front

18" - Side

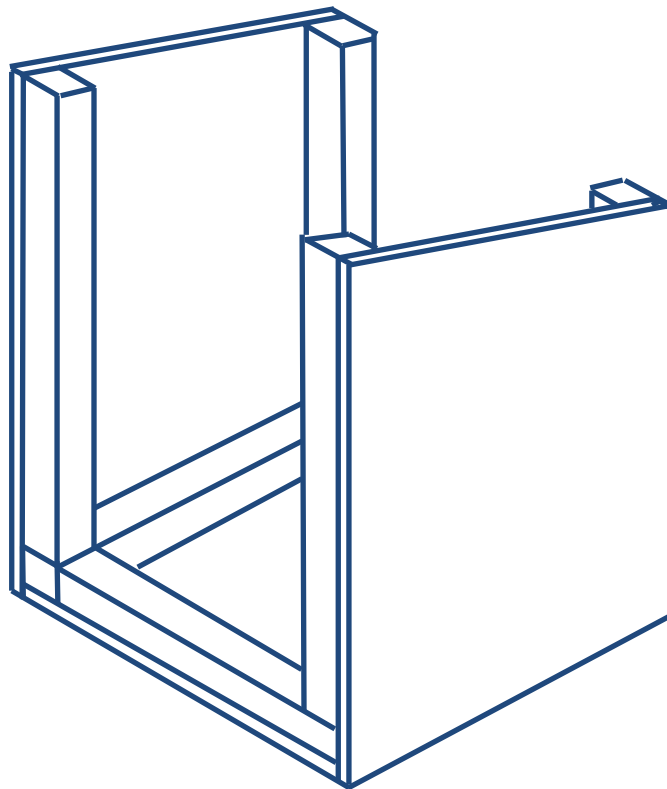2. Install plywood side wall using 3-4 screws, 1 & 5/8" long.

Place screws ~ 1" from edge of plywood to ensure that screws 24" enter 2x2 frame, not edge of plywood.

20"

17" - Front

3. Install 2x2 on side wall using 1 &5/8" screws, 4-5 per side.

To obtain the correct angle at the top of each 2x2, dry-fit each piece against plywood, mark angle and cut off before attaching.
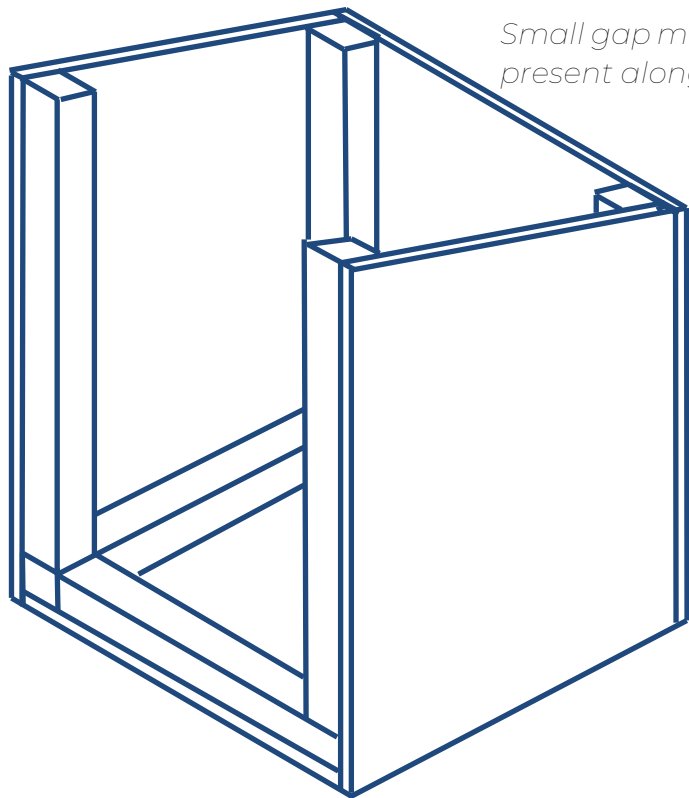
4. Repeat sidewall and 2x2 installation on other side.

5. Install back wall flush with sidewalls, using 10-15 screws.

   Make sure screws go into 2x2, not edge of plywood sidewalls.

Small gap might be present along the top

6. Attach "front porch" to the front wall piece using the 8" x 8" Piece of plywood cut out for entrance and a short section of 2x2; use screws aimed from inside of box, attach porch ~3" below the lip of entrance hole.
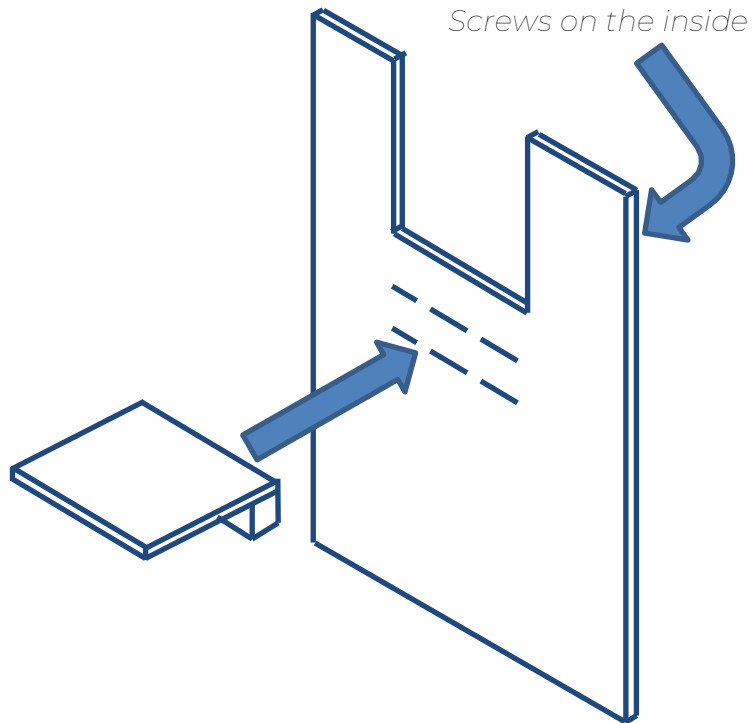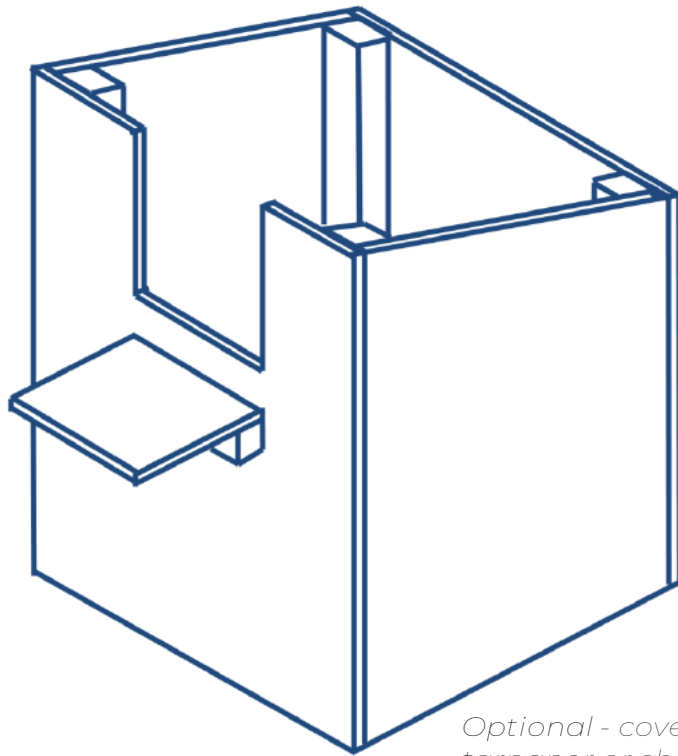
Screws on the inside

7. Install front wall (with attached front porch) to box using 12-15 screws.

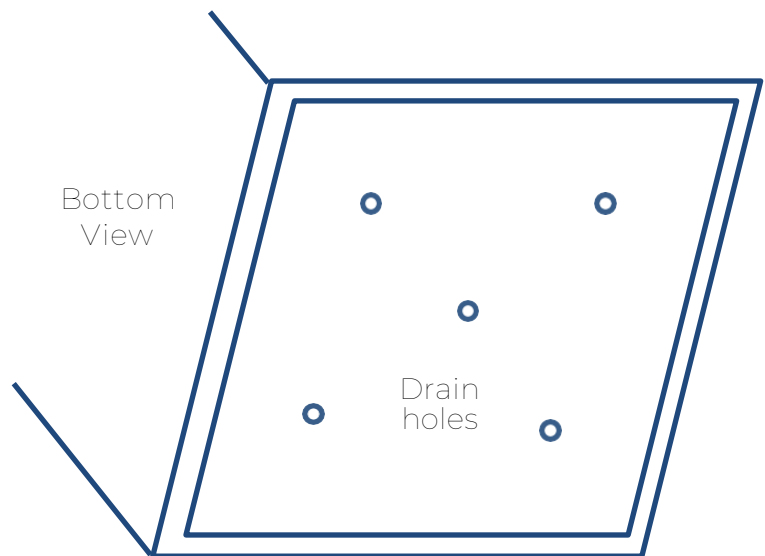   Make sure screws go into 2x2, not edge of plywood sidewalls.

Optional - cover roof with tarpaper or shingles. Use construction adhesive, short roofing nails or short staples to avoid sharp objects inside the box.

8. Install plywood roof 8 screws (2 per corner). Make sure screws enter 2x2 uprights. Provide 1" overhang on back and larger overhang above front entrance.
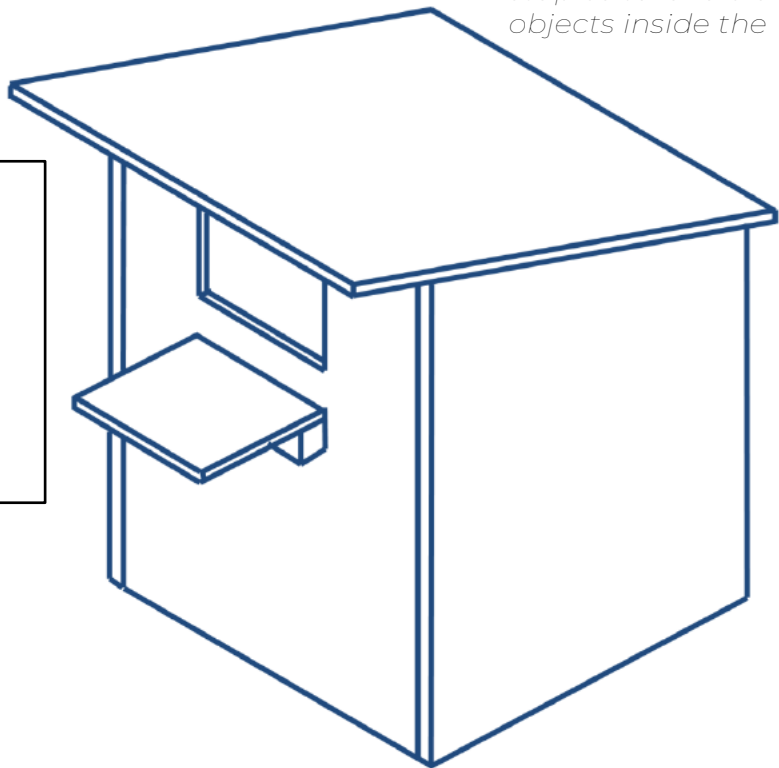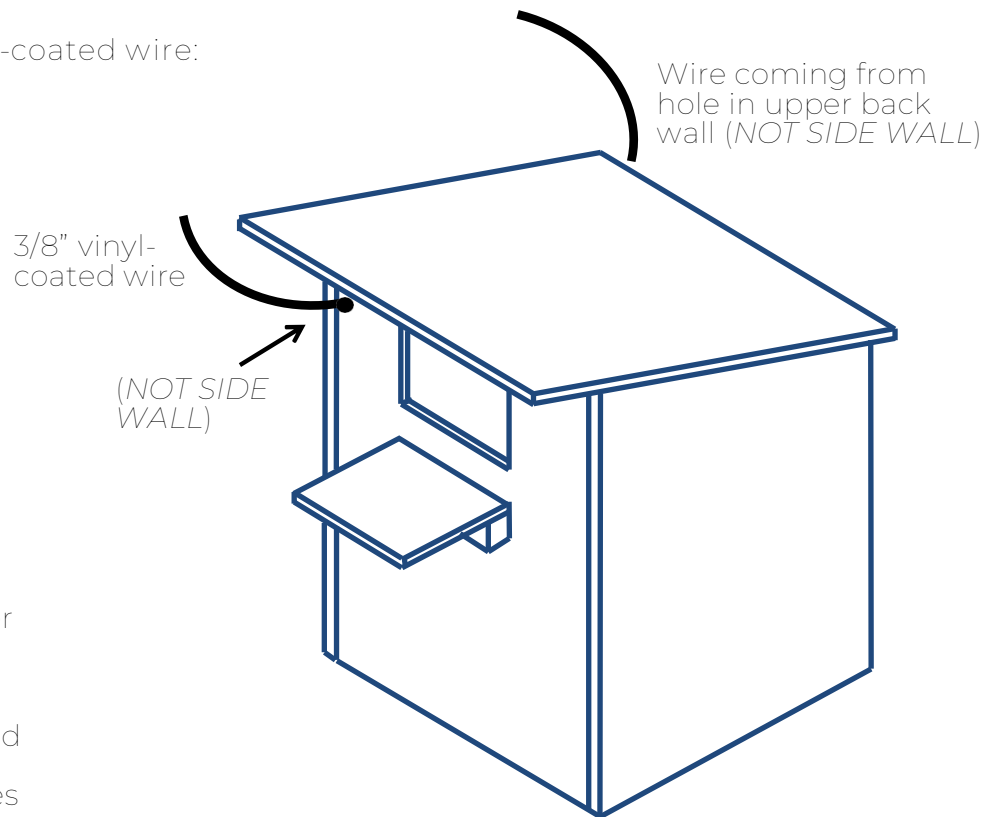
Before box installation:

- Check for sharp edges & points inside the box.

- Drill several ½" dia. drainage holes into the floor.

- Drill two ½" holes into the front and back wall, near the top, on the side of the face that will be mounted against the tree. Holes can go through the 2x2 frame, as well.

- Stain or paint the entire box. Make sure exposed plywood edges are covered.

Bottom View

Drain holes

Installation using vinyl-coated wire:

Wire coming from hole in upper back wall (*NOT SIDE WALL*)

3/8" vinyl-coated wire

(*NOT SIDE WALL*)

Hole for wire in upper front wall.

Once wire is looped and tightened around tree, connect two ends using 2 thimbles and 2-4 clamps.
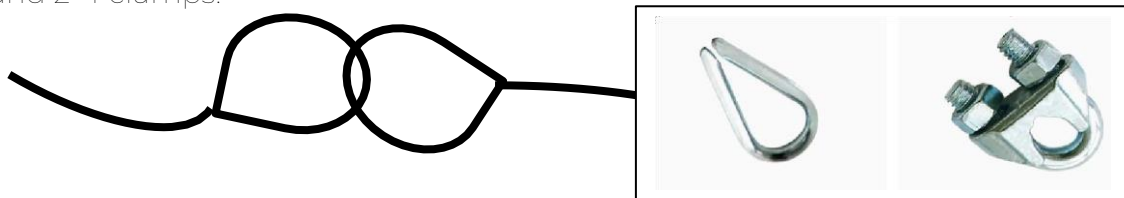
Installation:

1. Install the box with the entrance facing the side. That will make it easier to access the opening for annual cleanout.
2. Locate a suitable medium-sized to large tree with one or two sturdy horizontal limbs that can act as temporary support for the box until it is fastened to the trunk. These limbs will also serve as landing platforms for clumsy baby owls during their first flights.
3. A sturdy limb a few feet above the final box location can help with installation as well – pull the box up with rope or pulley system attached to that limb.
4. Feed vinyl-coated wire through the two installation holes in the box and attach thimble with clamps on one end.
5. Once the box is sitting in its final location, loop the free end of the wire around the trunk of the tree. If possible, place that loop above a limb on the opposite side of the trunk from the box location. Connect the free wire end to the looped end using thimble and clamps. Make sure the box is secure.
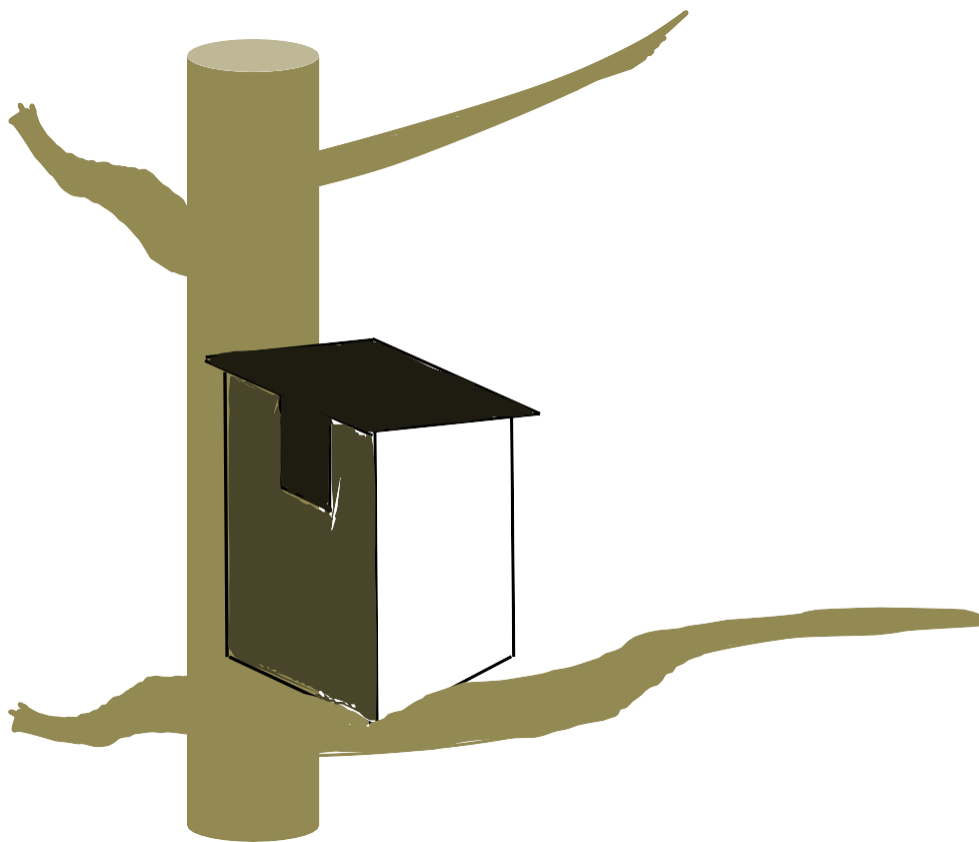
Cutting plan for full sheet of plywood (almost 2 nest boxes, some waste *NO FLOOR PIECES*)

24"   24"

18"

FRONT   FRONT

18"

ROOF
18 X 24

ROOF
18 X 24

~36"

18"

SIDE 18x
20/24"

SIDE 18x
20/24"

WASTE – 3"

~54"

18"

SIDE 18x
20-24"

SIDE 18x
20-24"

BACK
18 x 19 ¾"

BACK
18 x 19 ¾"

WASTE

~72"

19 ¾ "

WASTE – 3"

CAROLINA
RAPTOR
CENTER

6000 Sample Road, Huntersville, NC 28078 | carolinaraptorcenter.org