

Barn Owl Nest Box

Woodworking plans: cut list, sheet layout, drawings, and step-by-step assembly

SKILL LEVEL: COMPLEX

We rate the barn owl nest box plan complex. It is a large box: a 3 3/4" x 4 1/2" oval entrance on a 12 3/8" x 22 3/4" floor with 16" of depth, all cut from one sheet of plywood. The entrance sits on the short end, and a hinged cleanout door in one side lets you clean the box without taking it down.

Design Specs

Spec	Measurement
Entrance hole	Oval, 3 3/4" wide x 4 1/2" tall, on the short end
Floor (inside)	12 3/8" wide x 22 3/4" deep
Depth (inside)	16" (floor to underside of roof, measured at the front)
Mounting height	8 to 25 ft
Spacing between boxes	100 ft
Location	In a barn or silo, or on a pole near open fields

Materials

Item	Qty	Notes
3/4" exterior-grade plywood, 4 x 8 ft	1 sheet	All box parts; not pressure-treated
1 5/8" exterior deck screws (coated or stainless)	About 50	Main assembly
2" exterior hinges, with screws	2	Cleanout door
Hook-and-eye latch	1	Holds the cleanout door shut
Mounting bolts or lag screws	2	3/8" diameter; length to suit your pole, beam, or wall
Exterior wood glue	Optional	Fixed joints only

Tools

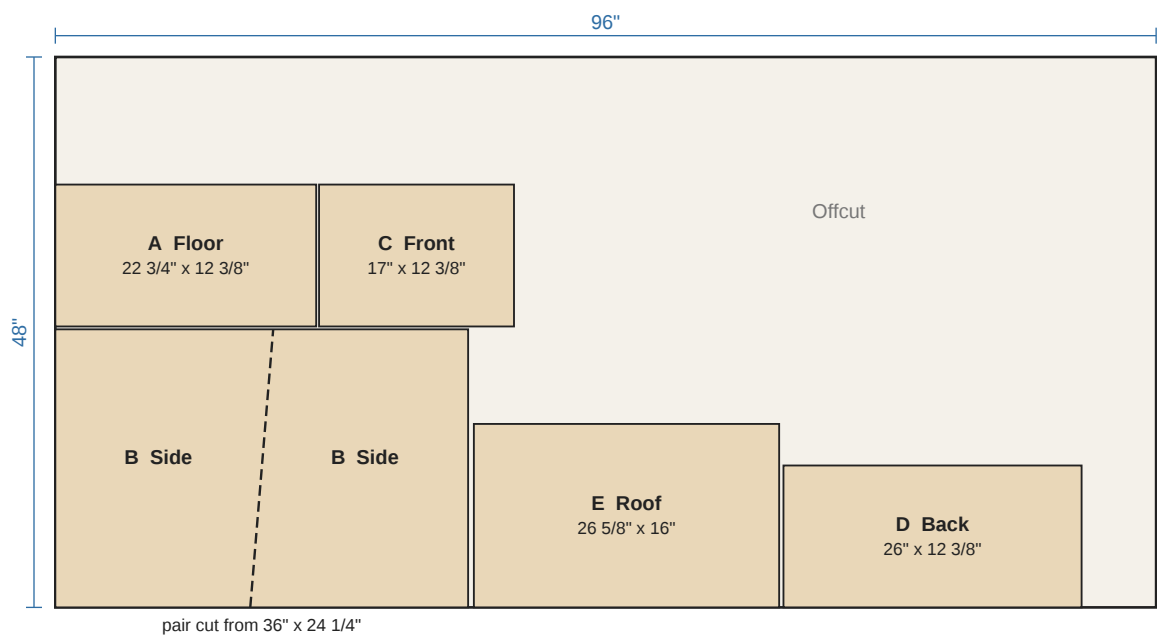
Circular saw with a straightedge guide (or table saw) • Jigsaw • Drill/driver • 1/2" bit for starter holes • 1" spade bit for vents • 3/16" bit for pilot holes • 3/8" bit for mounting holes • Compass • Straightedge • Tape measure • Pencil • Half-round file • Sandpaper • Clamps

Before you build: Leave the inside unfinished and skip the perch. The finished box is big and heavy, so plan on a helper for lifting and mounting. All dimensions assume plywood that measures a true 3/4"; check yours before cutting.

Cut List (all from 3/4" plywood)

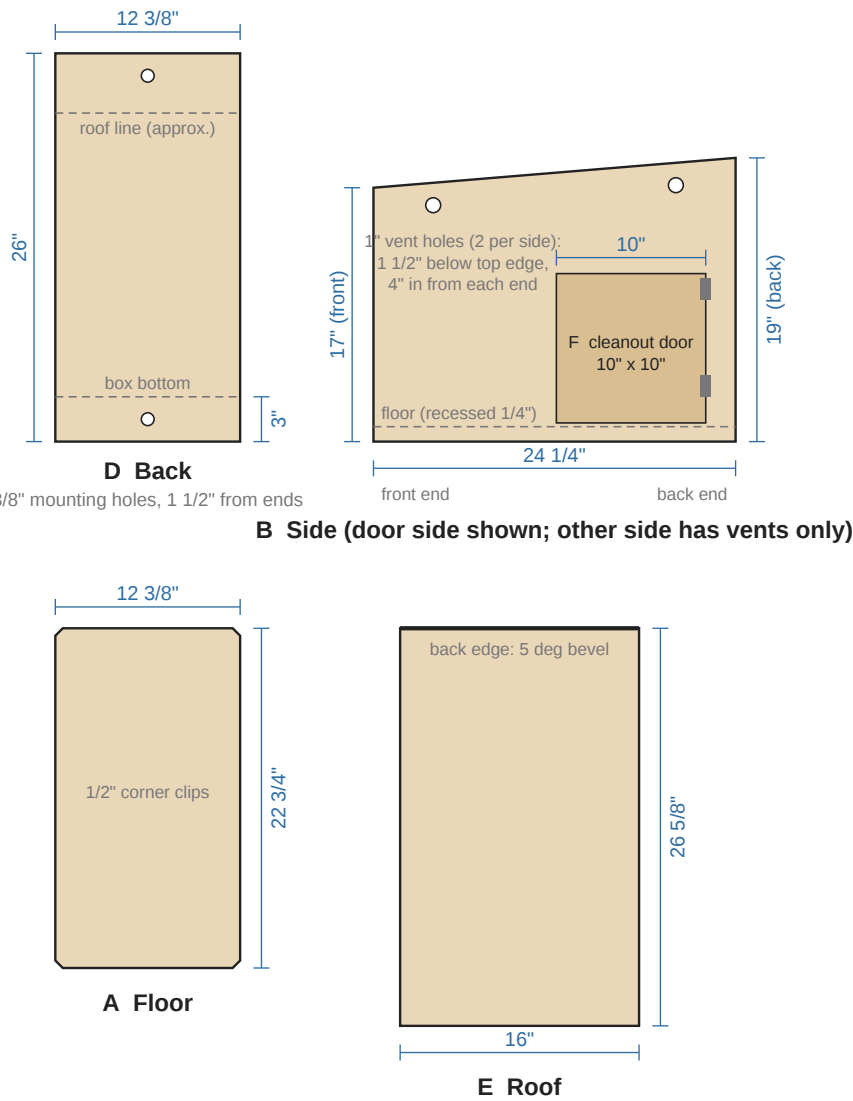
Part	Qty	Size	Notes
A Floor	1	12 3/8" x 22 3/4"	Clip each corner 1/2" for drainage
B Sides	2	24 1/4" long; 17" at front, 19" at back	Cut as a nested pair from one 24 1/4" x 36" panel; one side gets the cleanout door
C Front	1	12 3/8" x 17"	Oval entrance; bevel top edge 5 degrees
D Back	1	12 3/8" x 26"	Extends 3" below and above the box for mounting
E Roof	1	16" x 26 5/8"	Bevel back edge 5 degrees
F Cleanout door	1	10" x 10"	Cut out of one side panel (B)

Sheet Layout (4 x 8 ft sheet, top view)



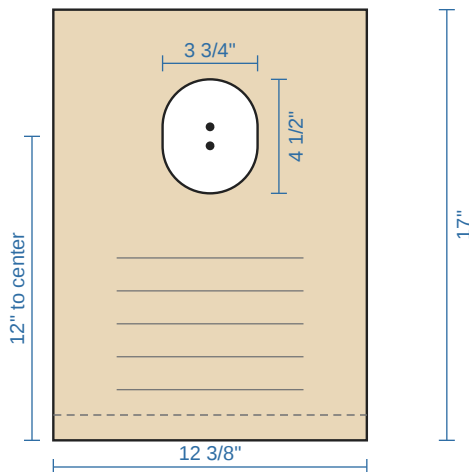
Cut the 24 1/4" x 36" side panel first, then split it into the two sides with one straight cut from the 17" mark on one edge to the 19" mark on the other (dashed line). Each side ends up 17" tall at the front and 19" at the back. Leave a saw kerf between parts; the layout has room to spare along the 96" length.

Part Drawings



Drawings are to scale. Dashed lines show where other parts meet. The front panel and entrance are shown on the next page.

Part C: Front Panel and Oval Entrance



C Front: 3 3/4" x 4 1/2" Oval

Laying out the oval: Draw a vertical centerline. Mark two points on it, 11 5/8" and 12 3/8" up from the bottom edge (3/4" apart). With a compass set to 1 7/8", draw a circle around each point. Join the two circles with straight lines down each side. That gives an oval 3 3/4" wide and 4 1/2" tall.

Cutting it: Drill a 1/2" starter hole inside the line, cut the oval with a jigsaw, and smooth the edge with a half-round file and sandpaper.

Fledgling ladder: On the inside face, cut five shallow horizontal saw kerfs (about 1/16" deep) below the entrance so young owls can climb out.

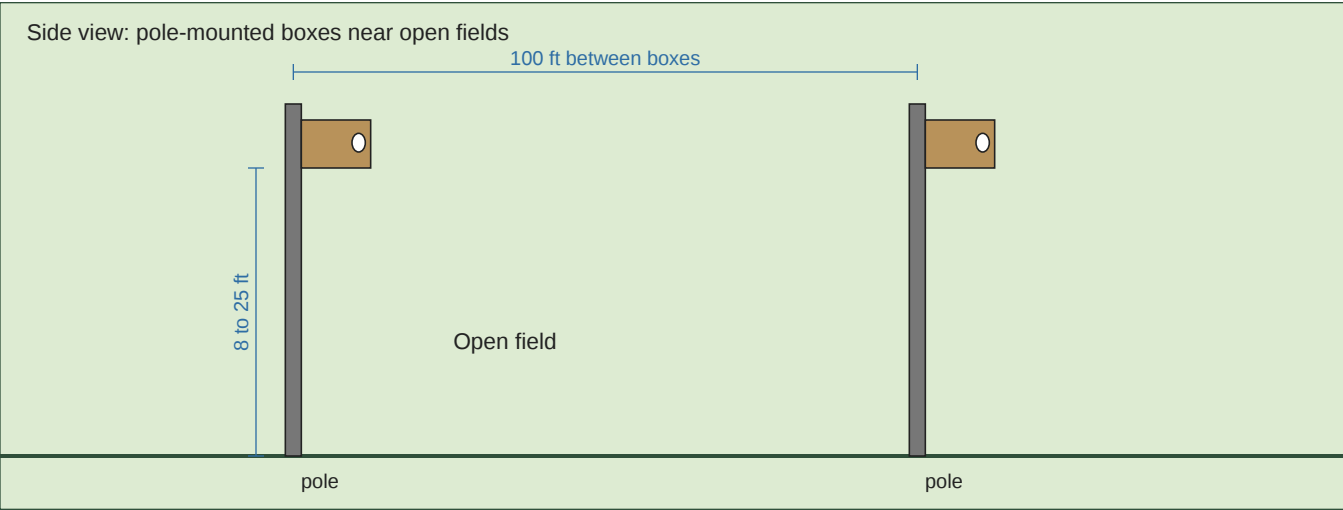
Assembly

- 1 **Cut all parts** per the cut list and sheet layout. Bevel the top edge of the front and the back edge of the roof at 5 degrees.
- 2 **Cut the oval entrance** in the front and cut the fledgling-ladder kerfs on the inside face. Clip the four floor corners 1/2".
- 3 **Cut the cleanout door** from one side. Mark a 10" x 10" square 2" in from the back end and 1 1/4" up from the bottom edge. Drill one 3/8" starter hole right on the line at a corner, then cut all four sides with a jigsaw. Save the cutout; it is the door.
- 4 **Drill the vents.** In each side, bore two 1" holes 1 1/2" below the top edge, 4" in from each end.
- 5 **Attach the sides to the floor.** Stand the floor between the sides, raised 1/4" above their bottom edges. Drill 3/16" pilot holes and drive 5 screws through each side into the floor.
- 6 **Attach the front (C).** Set it between the sides, bottom flush with the side bottoms. Drive 4 screws through each side into the front and 3 through the front into the floor edge.
- 7 **Attach the back (D).** Set it between the sides with 3" hanging below the box bottom. Drive 4 screws through each side into the back and 3 through the back into the floor.
- 8 **Attach the roof (E).** Butt the beveled edge against the back so the roof overhangs the front about 3" and each side about 1". Drive screws down into the sides about every 5", plus 3 into the front.
- 9 **Hang the cleanout door.** Set the door back in its opening, mount two hinges on the outside along its back edge, and add the hook-and-eye latch on the front edge. Check that it swings open and latches shut.
- 10 **Drill two 3/8" mounting holes** in the back, centered, 1 1/2" from each end.

Where to Put It

Place the box in a barn or silo, or on a pole near open fields. Mount it 8 to 25 ft high and keep boxes 100 ft apart.

Placement	Guideline
Location	In a barn or silo, or on a pole near open fields
Mounting height	8 to 25 ft
Spacing	Keep barn owl boxes 100 ft apart



Mounting Tips

- On a pole: bolt the box 8 to 25 ft up through the two holes in the back.
- In a barn or silo: fasten the box to a wall or beam 8 to 25 ft up through the same two holes.
- The box is heavy. Use a sturdy ladder and a helper to lift and mount it.
- Use the cleanout door to remove old nest material after the nesting season.