

*Sauna & Steam
Bath Equipment*

McCOY
SAUNA & STEAM
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*Wine Racking
Systems*

Grand Place Commons

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McCoy Pre-Cut Sauna Pre-Assembly Instructions

The McCoy pre-cut interior sauna package provides the materials and equipment to complete the sauna after the enclosure has been framed, insulated, and wired. Also, refer to the materials list and shop drawings attached. Electrical instructions are in the heater box.

Prior to assembly, store the sauna materials in a dry, heated area. After assembly, **do not apply any type of finish** to the interior of the sauna room or benches.

Wall and Ceiling Preparation

“Pre-Cut” means that the materials list is accurately prepared and the boards are cut to the closest 1 (one) foot increment to fit the room size. If your space is not restricted, you may slightly increase the framing dimensions to account for whatever thickness of drywall, furring, and/or finish lumber that may be used in your situation.

For standard rooms, the layout of the sauna may be as shown in the plan or a mirror image.

WARNING: ALWAYS use only galvanized or stainless steel fasteners.

I. **Framing**

1. **Framing**

With wood studs:

- Erect plumb and level walls with dry 2x4 wood studs @ 16” O.C. (on center)
- Build ceiling joists with 2x6 wood studs, or 2x4 wood studs if the span is less than 8 feet. Check the materials list to see which length of finish Tongue & Groove (T&G) is supplied for the ceiling (generally the shorter dimension) and plan accordingly so that the joists are perpendicular to the T&G.

With metal studs:

- Erect plumb and level walls with 3-5/8” galvanized metal studs @ 16” O.C. (on center).

- Build ceiling joists with 4”, 6”, or 8” galvanized members, according to the span. Check the materials list to determine which length of finish T&G is supplied for the ceiling (generally the shorter dimension). Plan the direction of furring and T&G so that each is perpendicular to the joists. Wood 1x furring strips or minimum 1/2” plywood must be attached to the metal studs.

2. **Framing for Heater Mounting**

Determine the location of the heater in the sauna. Add two 2x4 supports between studs for the heater brackets (the brackets are to be mounted **AFTER** the T&G installation). The height and location of the additional supports are determined by the mounting instructions supplied with the heater. **Note:** This procedure is not necessary with the commercial floor standing heaters.

3. **Framing for Ventilation**

The McCoy sauna includes a standard 1" undercut pre-hung door. This undercut should provide enough airflow for air exchange under most usage. **HOWEVER**, if you wish to vent your sauna in the traditional manner, and have requested the optional vent valve and grills, air inlet and outlet openings must be framed before attaching T&G paneling.

IF THE TRADITIONAL VENTING METHOD IS CHOSEN: Using 2x4 framing, frame an area with width dimensions of 3-1/4" high x 6-1/4" wide. Inlet and outlet vent openings should be the same size. The inlet vent framing can be installed by simply nailing two short 2x4's to the stud nearest the heater (the stud forms one side of the vent, the base-plate forms the bottom, and the two short pieces complete the rectangle). **See detail 1.**

The outlet vent should be as far as possible from the inlet, in the diagonal corner of the sauna---just below the top bench, frame the opening the same size as the inlet, but so the top of the vent opening is 26-3/4" off the floor. Again, use an existing stud to form one side of the vent. Nail a cross piece between the two studs for the vent base; then nail two short 2x4's as with the inlet—to form the 3-1/4" x 6-1/4" opening.

The exterior side of each ventilation opening is trimmed with the wooden louvered grills provided. Attach with the 2" screws, with the louvers angled down.

The sliding ventilation valve is mounted over the outlet, on the inside of the sauna, below the top bench support. Attach with 2" screws such that the maximum opening of the valve matches the opening in the wall.

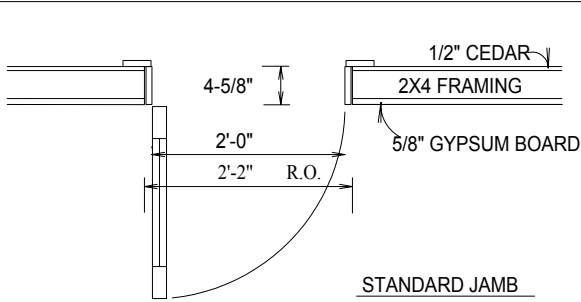
4. **Framing the Doorway**

The door's wooden rough opening is 2" wider than the door and is 83" high. With metal studs, back the metal jamb with a 2x4 wood stud. Locate the door according to the sauna plan. If the sauna is built behind a concrete/block wall, make the masonry opening 5" wider than the door. Attach 2x material to both sides of the masonry opening.

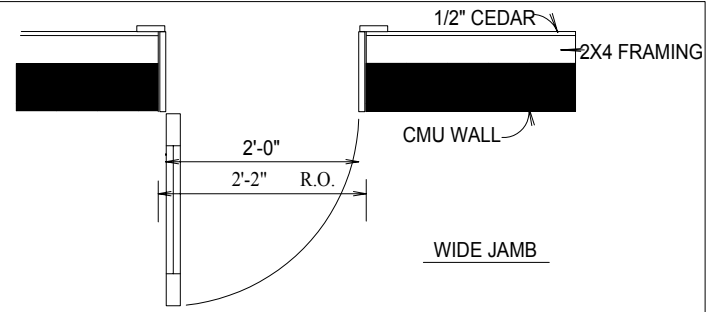
Other framing options for wider jambs:

1. Extend the framing/ furring from the wide masonry to provide the rough opening for the door jamb. Jamb extensions may be included but not attached to the jamb.
2. Leave the masonry opening wider than the door and cover the exposed framing around the door with Western Red Cedar.

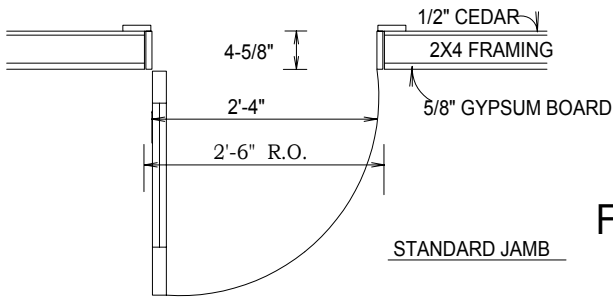
******SEE DOOR EXAMPLES ON PAGE 3&4******



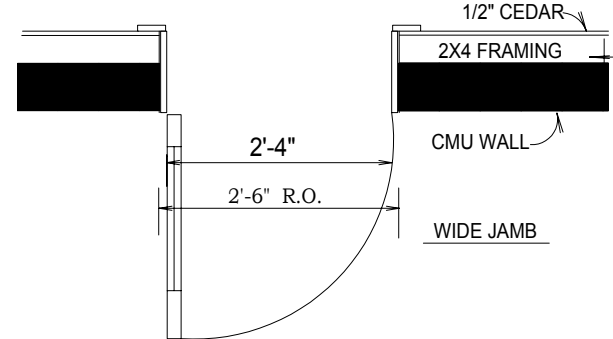
STANDARD JAMB F24P



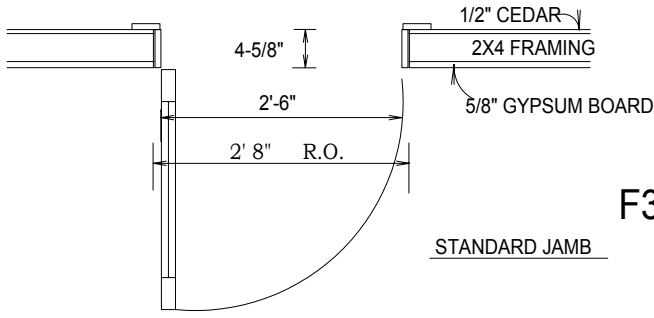
WIDE JAMB



STANDARD JAMB F28P

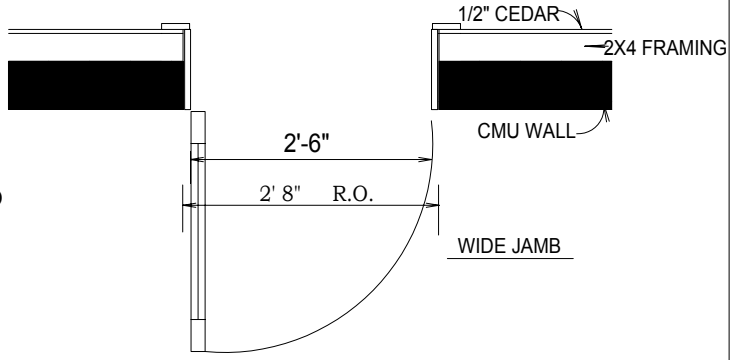


WIDE JAMB

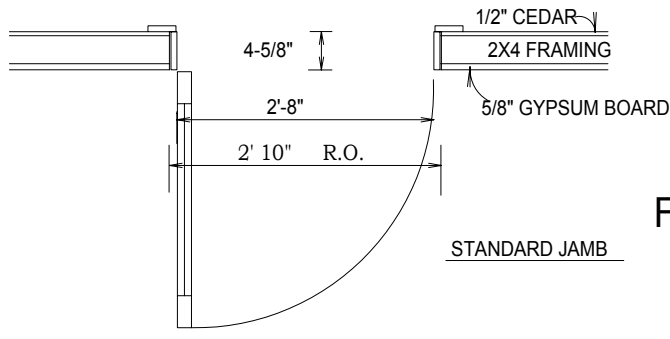


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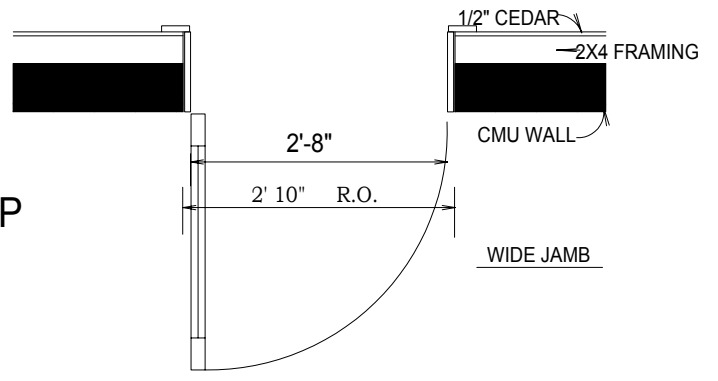


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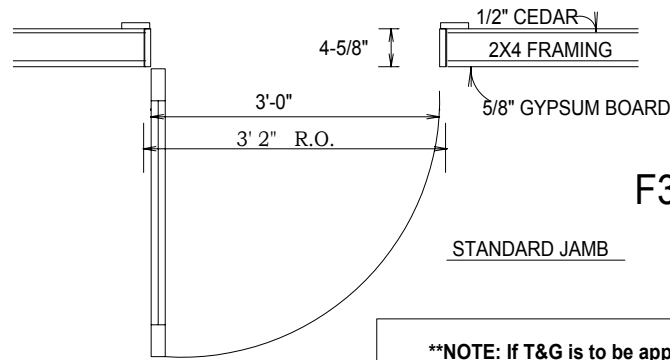


STANDARD JAMB

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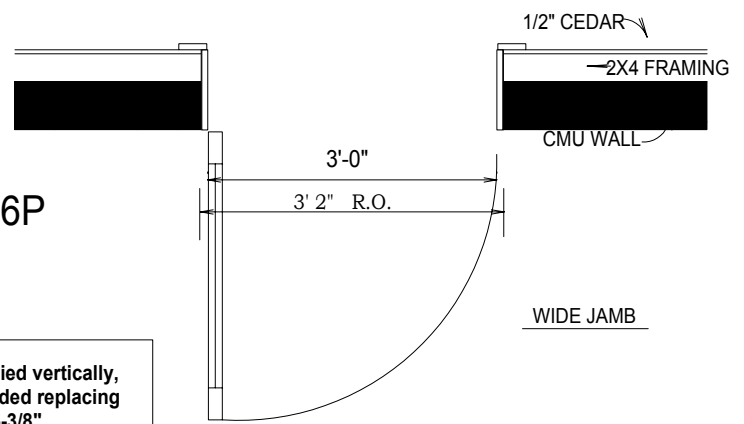


WIDE JAMB



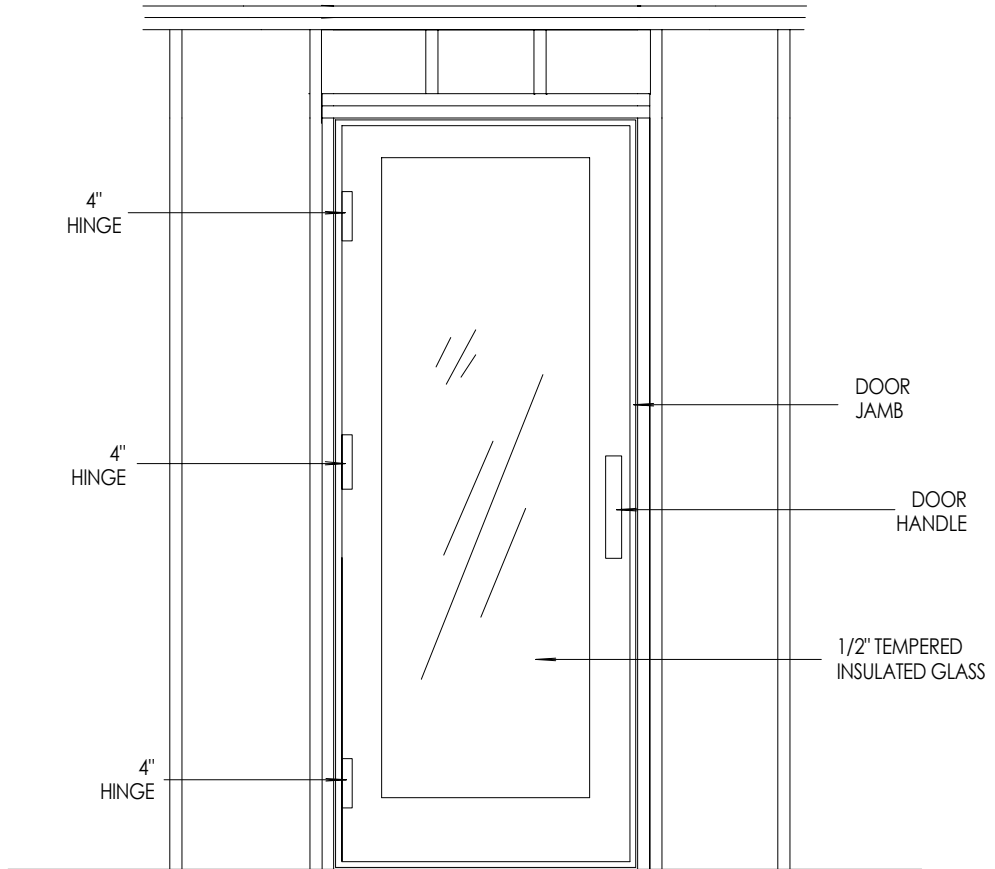
STANDARD JAMB

F36P



WIDE JAMB

****NOTE: If T&G is to be applied vertically, a 1x2 furring strip will be added replacing the 4-5/8" jamb to 5-3/8"**



SAUNA DOOR

Windows: If windows are indicated, provide a rough opening as shown on the sauna plan.

Heater: If a wall mounted heater will be installed, provide wood blocking between the studs to anchor and support the heater (refer to the mounting and wiring diagrams in your heating instructions).

- II. **Electrical:** It is much easier to rough-in electrical wiring when the framing is done, but before the insulation is put in. Have the electrician string wires from your breaker panel to the point on the wall where your heater will be mounted. Always leave plenty of wire on each end to make the final hook-up easier.

WARNING: Always use a licensed electrician.

Always follow wiring instructions provided with the heater. Always use proper wire size and type as specified in heater instructions (provided in heater box).

- III. **Insulation:** Tack 3-1/2" R-13 fiberglass between wall studs and 6" R-19 fiberglass between ceiling joists. For unusual wall construction, equivalent thermal resistance can be reached in a smaller wall space with polyisocyanurate rigid insulation. **Do not compress the fiberglass insulation** to fit into a smaller space. It will lose its insulating properties. The "backed" insulation should be faced to the interior of the sauna room.

- IV. **Gypsum Board:** In some areas, often for public dwellings, one course of 5/8" Type X fire-resistant Gypsum board is a building code requirement. Otherwise Gypsum board is unnecessary.

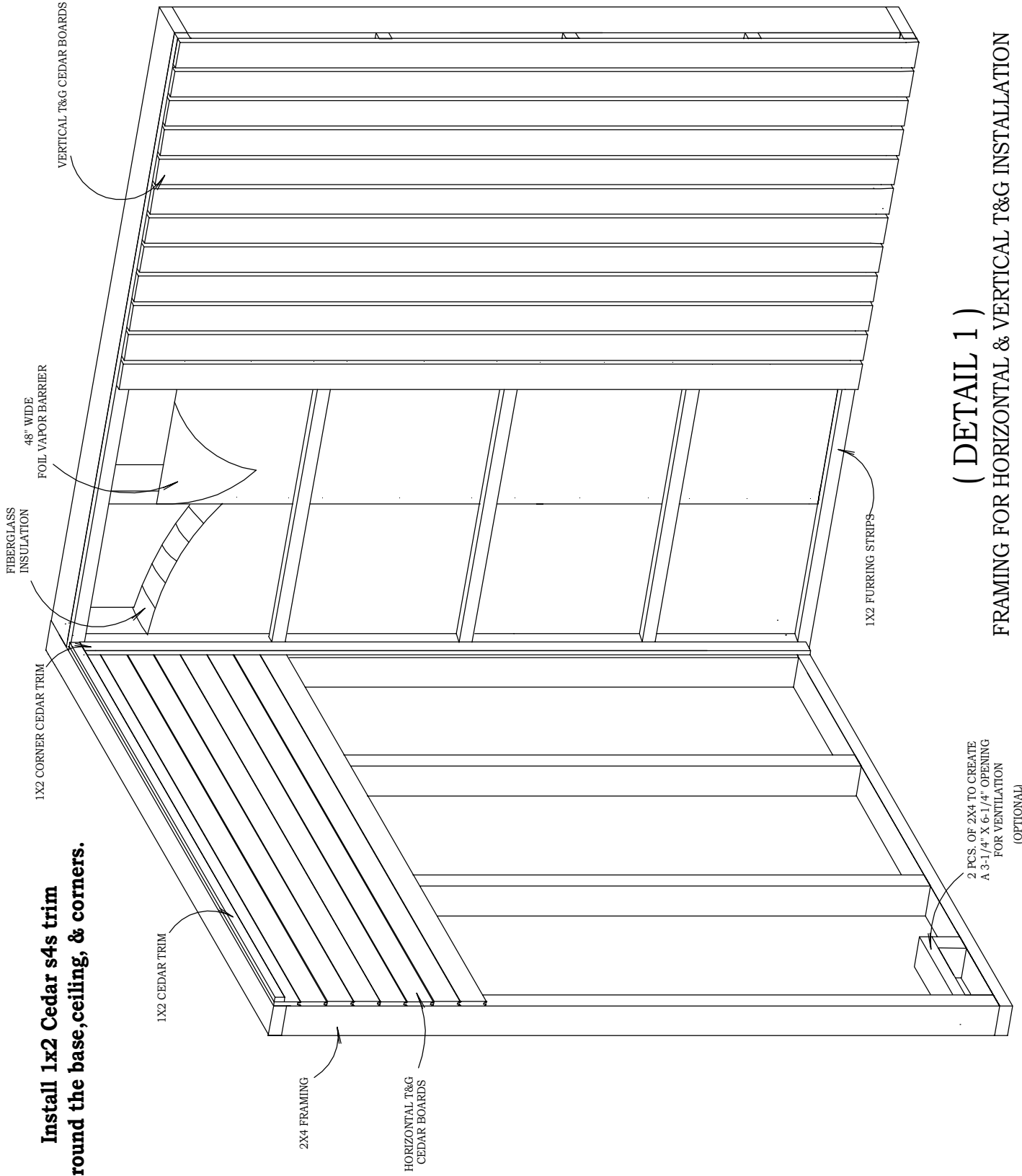
- V. **Firing:** If the T&G is to be applied vertically, apply horizontal 1x firing strips or 1/2" plywood as a nailing surface. Generally, the T&G is vertical in longer or odd shaped rooms. Check the materials list to see if all the T&G is supplied in the length of the ceiling height (usually 7 feet high).

**If the ceiling height is 7' high, 5 evenly spaced, horizontal wood firing strips will be needed from top to bottom.

**If the ceiling height is 8' high, 6 evenly spaced, horizontal wood firing strips will be needed from top to bottom.

See **detail 1** for T&G installation (horizontal & vertical), 1x2 Firing strip & 1x2 Cedar trim placement.

**Install 1x2 Cedar s4s trim
around the base, ceiling, & corners.**



**(DETAIL 1)
FRAMING FOR HORIZONTAL & VERTICAL T&G INSTALLATION**

Installation of the Pre-Cut Interior Package

1. **Identify components** – Open the boxes and identify all of the room components with the materials list.
2. **Foiled Vapor Barrier** – Staple the foiled vapor barrier horizontally to the interior framing or the furring (walls and ceiling) with the shiny side facing the room. The rolls are 4 feet wide, so it may be applied to the walls in two horizontal ranks allowing a 4” overlap.
3. **Ceiling and Wall Paneling** – Blind nail the T&G using 4d (1-1/2”) galvanized finish nails (or equivalent for use with air nailers). The last board on each surface may be ripped to fit.

Apply the wood in the following order:

Ceiling – Attach the T&G to the ceiling joists or furring. (Generally, if the shortest direction is longer than 8 feet, there will be a seam across the room to be covered by 1x2 trim).

Back Wall – If the T&G is applied horizontally, level the first board near the floor with the tongue upward. If the T&G is applied vertically, plumb the first board with the tongue toward the far wall.

Side Walls – Applied the same way as the back wall.

Front Wall – Usually, the front wall boards are supplied in full length to be cut for both front wall sections (to each side of the door).

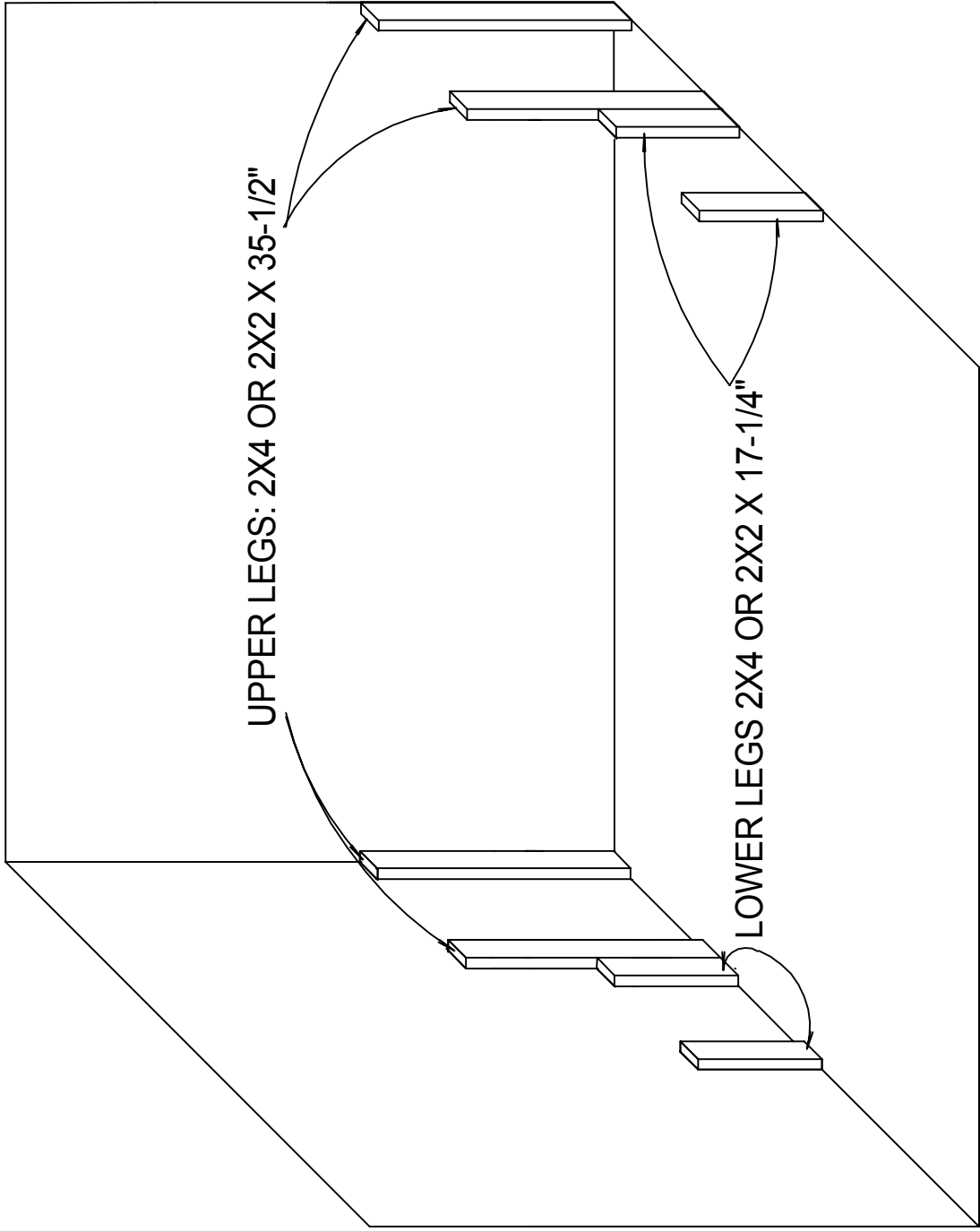
Exterior Walls – If the sauna package includes matching exterior wall material, install this as you did the interior walls.

4. **Benches** – Locate and attach bench legs (2x2 or 2x4 cedar) to the walls with two or three 8d galvanized finish nails. **(See Figure 1.)**

Construct and install the benches according to the McCoy plan **(See Figs 2&3.)** Place the 2x4 braces in the framing at 12” O.C. Framing is built with 16d common nails. Bench tops and horizontal faces are attached with minimum 4d (1-1/2”) galvanized finish nails (or equivalent for use with air nailers). When installing the bench top (1x4 S4S) apply the tops from back to front, spacing evenly as you go (approximately 3/8”). If the last top overhangs, it should be ripped to fit. Be sure to set all the finish nail heads below the surface so that the sauna bather will not be scratched or burned.

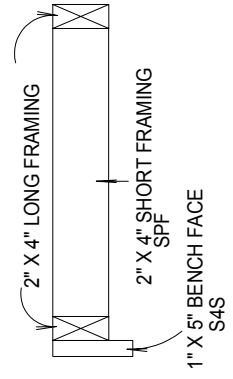
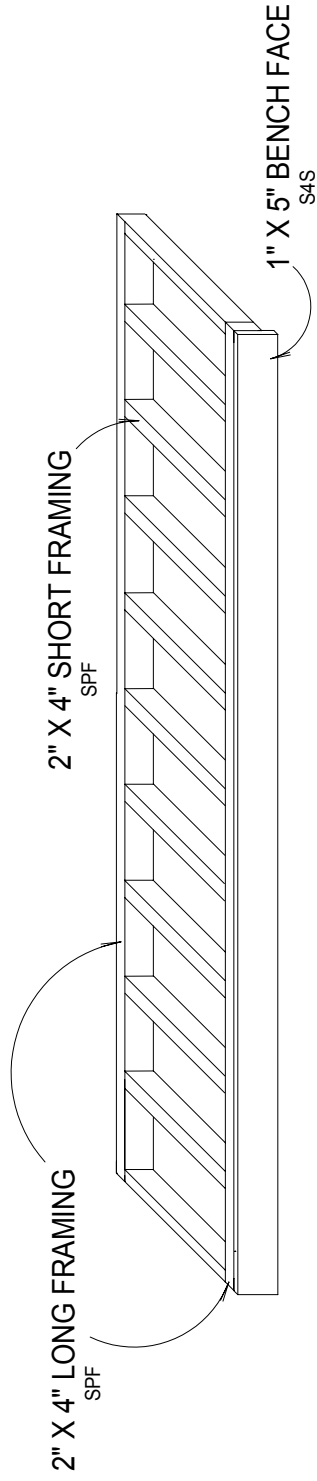
Place each bench on legs after each bench’s legs have been installed **(See Fig 3)**. Be sure to check the level and the leg locations before proceeding to the other legs and benches.

Nail the bench framing to the walls with 16d nails and into the studs or furring. You may use 3” screws for removability.



LEG PLACEMENT

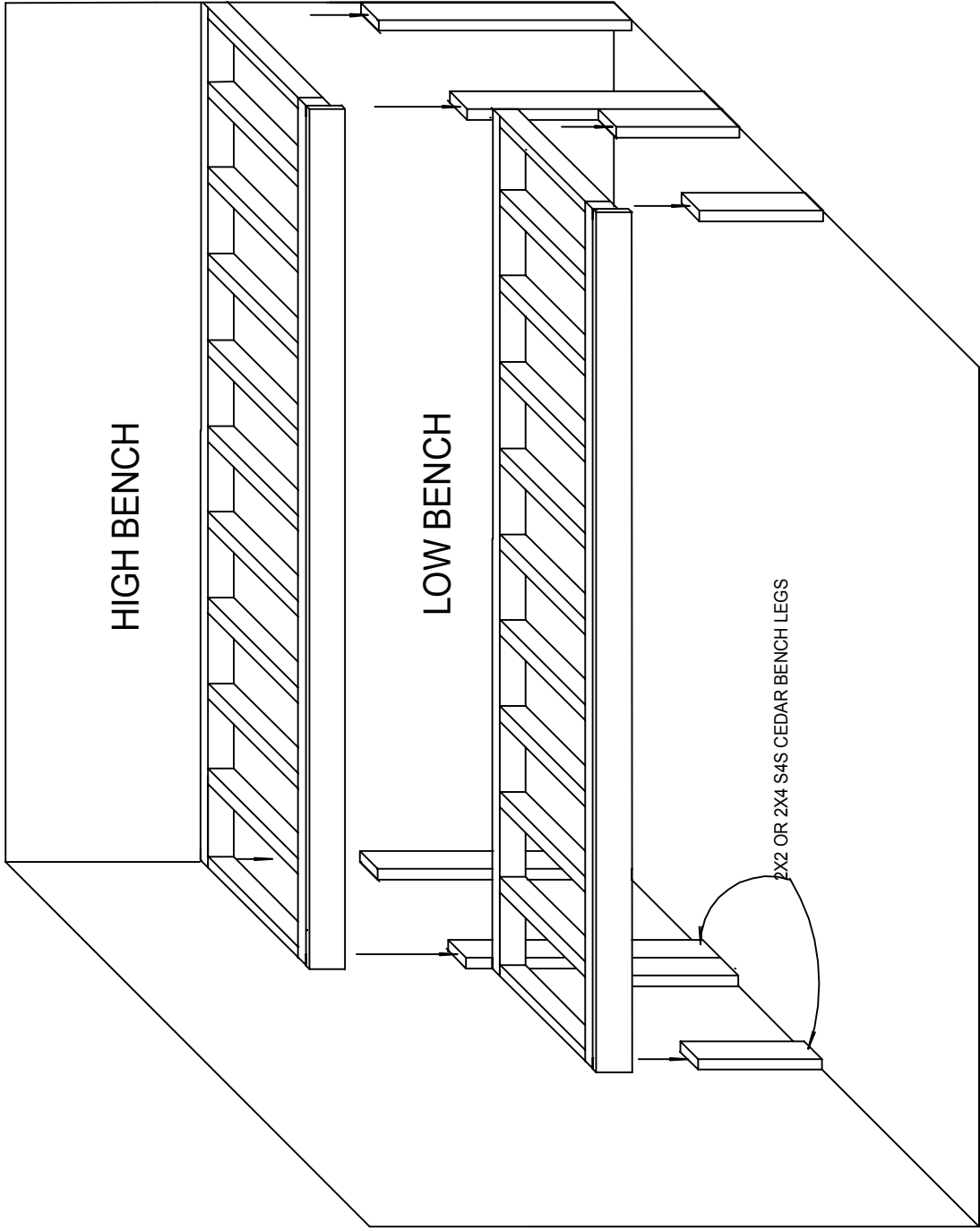
FIG 1



BENCH FRAMING

BENCH ELEVATION

FIG 2



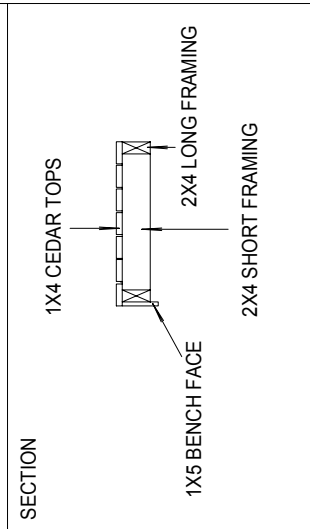
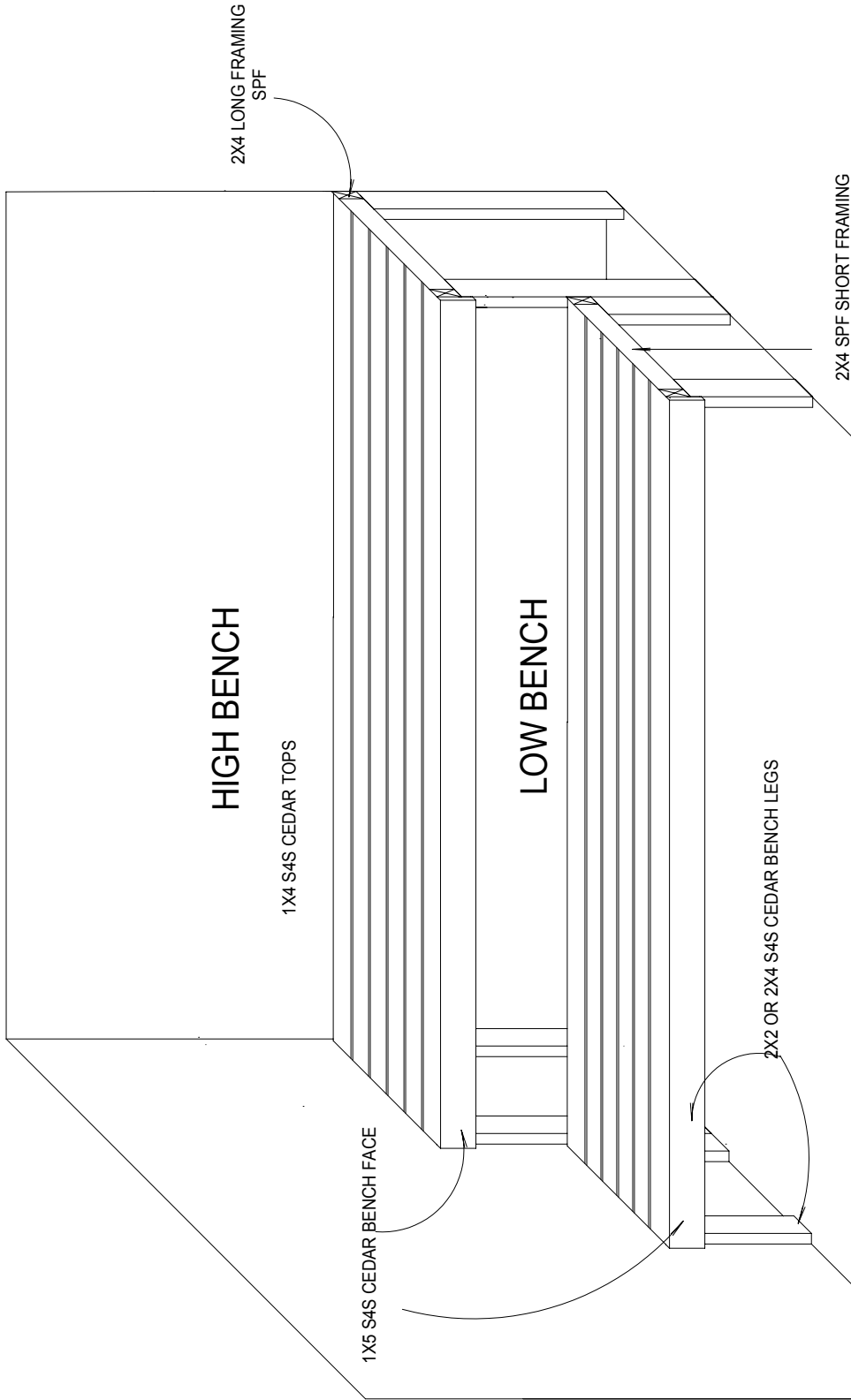
HIGH BENCH

LOW BENCH

2X2 OR 2X4 S4S CEDAR BENCH LEGS

BENCH ASSEMBLY

FIG 3



BENCH TOP DETAILS

FIG 4

Bench ends which abut bench faces are attached to the adjoining bench with four 16d nails (or 3" screws), frame to frame. The tops at those ends are recessed approximately 1/4" to accommodate the overhanging top of the adjoining bench.

When benches span more than six feet or have an end not supported by a wall, "Double Low" or "Triple High" legs should be used to provide additional support. If the floor is not level or is sloped for a drain, the legs may be shimmed between the leg and frame. The additional legs are used in the following situations:

Triple High Legs – Used on the high benches of the sauna. If a high bench is longer than six feet, the triple high leg is installed in the middle of the front 2x4 of the high bench. This leg will support the front of the high bench and the back of the low bench. A triple high leg may also be used if a high "return" bench is installed perpendicular to a full length bench. A triple high leg will be attached to the freestanding end of the bench and will again support the front of the high "return" bench and the back of the low "return" bench.

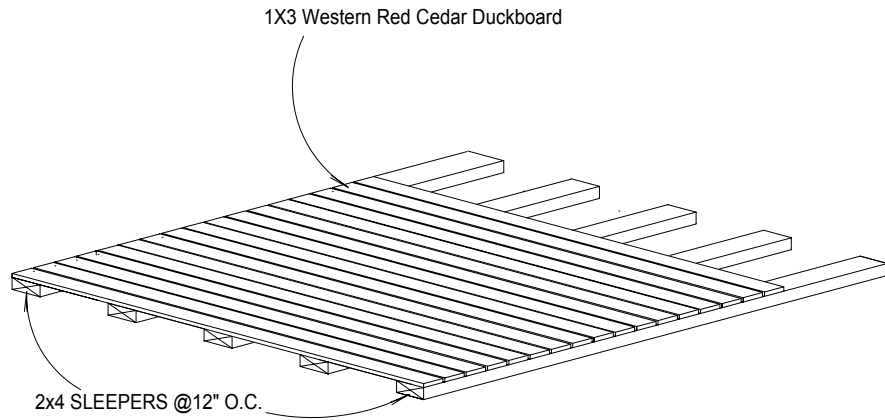
Double Low Legs – Used on the low benches of the sauna. The double low legs are used similarly to the triple high legs; however, the double low legs support the low bench only. Double low legs are used in the same situations as the triple high legs.

5. **Trim** – Cut 1x2 ceiling, base, and corner trim to length and nail the pieces in place with 4d galvanized nails (every 16"). Set all exposed nail heads. **Note:** Trim should be nailed in place **AFTER** all T&G paneling and all bench material has been installed (**See Detail 1**).
6. **Heater** – Install the heater mounting brackets to the wall and mount the heater according to the Heater installation Instructions (found in the heater box). Attach guard rail according to heater instructions.
7. **Duckboard** – Build duckboards from 1x3 Western Red Cedar to cover the walk area, angling the 4d nails into the wood S4S sleepers.

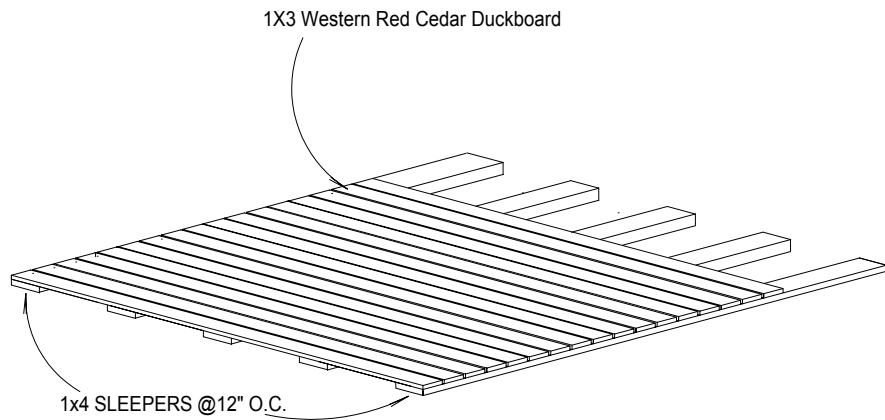
Sections can be built as necessary to accommodate the walk area. **Duckboard flooring does not extend underneath heating unit or benches.** Squarely space the boards to match the longest bench tops (parallel to long bench tops) and attach to 1x4 or 2x4 sleepers (which are 12" apart O.C.). The duckboards lie on top of the sleepers perpendicularly and are spaced 1/4" apart (**see Fig. 5**).

After assembly, the duckboard flooring lays loosely and is removable. Trim ends as necessary.

8. **Door** – Fit the door with shims. Plumb and nail the jamb on the hinged side of the jamb at three heights with 8d finish nails (next to shim). After that, plumb, level, and nail the strike side. See that the door and the jamb are parallel and do not bind. If necessary, attach a jamb extension toward the interior, against the same shims, ripped to an accurate width to fill any gap. (**See pages 3 & 4.**)



COMMERCIAL



RESIDENTIAL

DUCKBOARD COMMERCIAL & RESIDENTIAL APPLICATIONS

Attach the door handle on the exterior side at approximately the same height (1/2" offset) as door handle attached on the interior. (Use 1-1/4" screws.)

Install 1x3 interior door casing (leaving an 1/8" reveal). Set all exposed nail heads.

9. **Thermometer / Hygrometer** - Hang the thermometer and hygrometer (if furnished) approximately 3" to 5" from the ceiling on the side wall.
10. **Signs** – Install all instruction, caution, and warning signs that are supplied in the heater or accessory box. The Caution & Warning signs are mounted above the heater on the interior, and the Clear Acrylic Instruction Sign is mounted beside the door on the exterior, generally on the strike side.
11. **Electrical work** – Leave the duckboard flooring and guard rail sections in a convenient and safe spot until after the electrical wiring and wall lamp are installed by a qualified electrician. Also, protect the bucket, dipper, and head/back rests, if any are included.
12. **IT'S ALL OVER. STAND BACK AND ADMIRE YOUR WORK!!!!!!**