MEMBERS VAULT · BUILD PLAN

Backyard Build Plan

Building Your Backyard Smokehouse — the Chapter 15 build order, from the first phone call to test fires with no food.

To be used with Building Your Backyard Smokehouse

These sheets follow the Build Order in Chapter 15 of *Building Your Backyard Smokehouse*. That chapter pulls the earlier ones together into one sample design: a 4-by-4 wood-frame smokehouse on a small slab. The book is clear that it is a starting point you can adapt, not certified plans, and that a small wood smokehouse is a few weekends of work for one person, plus slab cure time. I did not invent a tighter weekend calendar than that. Read the matching book before you build, follow local codes and permits, and treat the sheets as a companion, not a substitute for the book or for a qualified professional. Start here only if this is the book and the site you actually have.

WHAT'S IN THIS SET

A short how-to page, a blank sheet you can copy, ten session sheets in the book's Build Order, and the Chapter 15 materials list with the Appendix D tool list. Quantities in the book depend on your drawing. The bag counts and vent sizes are the book's figures for the sample 4-by-4 design.

These sheets are a planning companion to the matching book. They are not engineering, structural, electrical, or safety advice and not a substitute for local codes, permits, or a qualified professional. Measurements, materials, and safety notes must come from the book. Do not build from a blank field. Chapter 15 is a starting point you can adapt, not certified plans.

BUILT, NOT JUST WRITTEN.

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How to use these sheets

Chapter 15 already put the work in order: plan and check, prepare the site, pour the slab and let it cure, frame, vent while the roof is still open, close in, line the interior, hang the door, set up the heat, then commission it. These sheets follow that list.

1. Read the matching chapters in *Building Your Backyard Smokehouse* before you start a session. The sheet is a checklist, not the method.
2. The sample is a 4-by-4 wood-frame house on a 5-by-5 slab. If your design differs, use the blank master and your own drawing. Do not force the sample quantities onto a different size.
3. Do not frame until the slab has cured. The book says several days at minimum, longer if you can.
4. The questions are questions, not a sign-off that the design is approved or code-compliant.
5. Commissioning is test fires with no food. Read the food-safety and curing chapters before you cure or cold smoke anything.

A NOTE ON WEEKENDS

The book does not assign each Build Order step to a numbered Saturday. It says a small wood smokehouse is a few weekends of work for one person, plus slab cure time, and that the door takes longer than you expect. Block or brick takes longer. I kept the book's order rather than inventing a two-day calendar.

Figures on these sheets are from the book's sample 4-by-4-foot wood-frame smokehouse (about 6 feet of clear height) in Chapter 15, with a 5-by-5-foot, 4-inch slab. The book says quantities depend on your exact dimensions — work out real numbers from your own drawing. Check the design against your local codes before you build.

These sheets are the working copy. The method, the why, and the full detail stay in Building Your Backyard Smokehouse.

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Blank work-session sheet

Master template — not a design

Master template — copy this page if your smokehouse is not the Chapter 15 sample, or for a work session the Build Order does not already name. Do not invent materials, cuts, measurements, or safety steps. If the book and your drawing do not give a figure, leave the line blank and go back to them.

PROJECT / DESIGN _____ SESSION NAME _____

DATE _____ HELPERS _____

WEATHER _____ FROM BOOK CHAPTER _____

THIS SESSION'S AIM

NOT THIS SESSION

MATERIALS FOR THIS SESSION

Item	Qty (from book or drawing)

TOOLS

Tool

STEPS (IN THE BOOK'S ORDER)

- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____
- [ ] _____

BEFORE YOU START · SITE / PERMIT QUESTIONS

Write them as questions. Never as a promise the design is approved.

- [ ] _____
- [ ] _____
- [ ] _____

DONE WHEN _____ NEXT SESSION _____

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Plan and check

Build Order 1 · Before you buy materials or dig

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Decide what you'll smoke, how you'll heat it, and whether the site and the rules will support it. Finalize dimensions on paper before you buy anything.

Not this session. Do not pour a slab or order a full lumber list until permits, setbacks, fire rules, and insurance have been checked. Do not guess the dimensions.

MATERIALS FOR THIS SESSION

- [ ] A notebook for the three decisions in Chapter 1 and the Project on One Page checklist
- [ ] Your own dimensioned sketch, before any order is placed

CUTS / LAYOUT

None. This session is paper, phone calls, and a walk of the property.

TOOLS

The Project on One Page checklist at the front of the book

BEFORE YOU START

- [ ] Review Chapter 24, Safety Around the Smokehouse, before you go further.
- [ ] Call 811 before you dig (Chapter 15 Build Order).
- [ ] The sample design is a starting point you can adapt, not certified plans. Check it against your local codes before you build. (Chapter 15)

STEPS — IN THE BOOK'S ORDER

1. Decide what you'll smoke most, and how much of it at once. Decide hot smoking, cold smoking, or both — plan for both if there's any chance you'll want cold smoke later. (Project on One Page; Chapter 1)
2. Choose wood, propane, or electric heat, and whether you need a fuel that still works under fire restrictions. (Project on One Page; Chapter 6)
3. Walk the site: prevailing wind, distance to your house and the neighbors' windows, drainage, and what burns nearby. (Chapter 5)
4. Call the building department. Tell them the size, the materials, and how you'll heat it. Ask about zoning setbacks and whether a permit is required. (Chapter 6)
5. Find out who issues fire restrictions where you live, whether they apply on private property, and how they treat wood, charcoal, propane, and electric heat. (Chapter 6)
6. Ask your insurance agent whether a detached structure with a fire in it is covered, whether it needs to be listed, and whether the heat source changes anything — before you build. (Chapter 6)
7. If you have an HOA, get written approval. A verbal okay from a board member doesn't protect you when the board changes. (Chapter 6)
8. Talk to the neighbors before you build, especially the ones downwind. (Chapter 6)
9. Finalize dimensions on paper before you buy anything. The sample in Chapter 15 is 4 by 4 feet inside, about 6 feet of clear height — adapt it; don't treat it as certified plans.

SITE / RULE QUESTIONS

- [ ] Have you checked local permit and setback rules for a smokehouse of this size and heat source?
- [ ] Have you asked who issues fire restrictions, and how they treat your planned heat source?
- [ ] Have you asked your insurance agent about a detached structure with a fire in it?
- [ ] If you have an HOA, do you have written approval?

Done when. You have answers on permits, setbacks, fire rules, and insurance; a heat-source decision that can live with local restrictions; neighbors have been told; and dimensions are on paper.
Next session. Prepare the site, then pour — only after 811 marks are in if you'll be digging.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Prepare the site

Build Order 2 · After the checks, before the pour

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Clear, level, and grade the spot so water drains away from the building on every side. If the site collects water, fix that before you pour: move the site, raise it, or add a drain.

Not this session. Do not pour on a wet or unlevel spot. Do not skip 811 if you will be digging.

MATERIALS FOR THIS SESSION

- ☐ Stakes and string for the outline
- ☐ Gravel later, for the slab base (Chapter 9 and the Chapter 15 list)

TOOLS

4-foot level and a string line
Tape measure
Shovel, rake, and hand tamper (Appendix D)

CUTS / LAYOUT

Stake the building outline. The sample slab is about 5 by 5 feet, extending 3 to 6 inches past the walls on every side (Chapters 9 and 15). Use your own drawing if it differs.

BEFORE YOU START

- ☐ Call 811 before you dig.
- ☐ Review Chapter 24 before any later fire or fuel work.

STEPS — IN THE BOOK'S ORDER

1. Call 811 before you dig. (Chapter 15 Build Order)
2. Clear the site.
3. Level and grade so water drains away from the building on every side. (Chapters 9 and 15)
4. If the site collects water, fix that before you pour: move the site, raise it, or add a drain. (Chapter 9)

SITE / RULE QUESTIONS

- ☐ Have 811 marks been placed if you are digging?
- ☐ Does the ground drain away from the building on every side?

Done when. The site is clear, roughly level, and graded so water drains away, and 811 is done if you dug.
Next session. Pour the slab (or set a gravel pad only if you are building a light wood-frame house you might move — see Chapter 9).

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Pour the slab

Build Order 3 · After the site is graded; then wait for it to cure

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Pour a level, square slab with a compacted gravel base, reinforcing, thickened edges, and anchor bolts set in the wet concrete. Then let it cure before you build on it.

Not this session. Do not frame walls on a green slab. The book says several days at minimum, longer if you can, and to keep it damp in hot, dry weather. A firebox belongs on concrete or masonry, not on a gravel pad.

MATERIALS FOR THIS SESSION

- [ ] Gravel for the base, compacted in place (Chapter 9)
- [ ] Concrete: the book's sample 5-by-5-foot slab at 4 inches is 8.3 cubic feet, about 14 bags of 80-pound premix before thickened edges, which can push it to 18 or 20. Buy a couple of extra bags. Chapter 15 lists 15 to 20 bags for a 5-by-5 slab with thickened edges, plus rebar or mesh, form boards, and stakes.
- [ ] Anchor bolts and a sill gasket, bolts set while the concrete is wet (Chapters 9 and 15)
- [ ] In cold climates, the book notes frost is the concern and some areas require footings below local frost depth; consider rigid foam under the slab. Check with your building department.

TOOLS

Wheelbarrow, shovel, rake, and hand tamper
Concrete float and edger
4-foot level and string line (Appendix D)

BEFORE YOU START

- [ ] Use safety glasses, gloves, and hearing protection (Appendix D).
- [ ] Don't frame until the slab has had the cure time the book describes.

CUTS / LAYOUT

Form a slab that extends 3 to 6 inches past the walls on every side, about 4 inches thick, edges thickened under the walls (Chapter 9). Use your drawing if it differs.

STEPS — IN THE BOOK'S ORDER

1. Lay a compacted gravel base first. (Chapter 9)
2. Set the forms, square them, and place rebar or welded wire mesh.
3. Pour the slab. Set anchor bolts for the sill plate while the concrete is wet.
4. Measure the diagonals. If they match, the slab is square. Fix any real error now — after the walls are up, you can't. (Chapter 9)
5. Let it cure before building on it. Several days at minimum, longer if you can. Keep it damp in hot, dry weather.

SITE / RULE QUESTIONS

- [ ] Have you checked frost depth and footing requirements with your building department?
- [ ] Do the diagonals match?
- [ ] Are the anchor bolts in before the concrete sets?

Done when. The slab is poured, square, and curing, with anchor bolts in place. Walls wait until the cure time has passed.
Next session. Frame the walls — after the slab has cured.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Frame the walls

Build Order 4 · After the slab has cured

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Set an anchored sill, frame the door wall first with the opening plumb and square, then tilt up, brace, and anchor the walls.

Not this session. Do not use green or wet lumber. Do not use treated lumber inside the smoke chamber. Do not close the roof yet — vents are easier to install while everything is still open.

MATERIALS FOR THIS SESSION

- [ ] Dry, straight 2×4 lumber for sill, studs, and plates. For walls around 6 feet tall, the book says 2×4 framing is plenty. (Chapters 10 and 15)
- [ ] A doubled 2×6 door header (Chapters 10 and 15)
- [ ] Sill gasket; if the sill is treated, keep it outside the smoke chamber. (Chapter 10)

CUTS / LAYOUT

Frame the door opening first: full-height king studs on each side, jack studs carrying a doubled 2×6 header. Studs at 16 or 24 inches on center both work at this scale; closer spacing gives you more to fasten boards to. (Chapter 10) Cut from your drawing, not from a guessed list.

TOOLS

Circular saw and hand saw
Drill and driver
Framing square, speed square, tape measure
4-foot level and string line (Appendix D)

BEFORE YOU START

- [ ] Use dry, straight lumber — green or wet lumber twists, pulls joints apart, and throws the door out of square.
- [ ] Safety glasses, gloves, and hearing protection.

STEPS — IN THE BOOK'S ORDER

1. Set a sill plate on a sill gasket and anchor it to the slab. (Chapter 10)
2. Frame the door wall first, with the opening plumb and square. (Chapter 15)
3. Build each wall flat on the slab and tilt it up. Brace and anchor. (Chapters 10 and 15)
4. Check plumb and square at every stage. (Chapter 10)

SITE / RULE QUESTIONS

- [ ] Is the door opening plumb and square before you tilt the wall?
- [ ] Is any treated sill kept outside the smoke chamber?

Done when. Walls are up, braced, and anchored, and the door opening is plumb and square. The roof and vents come next, while the building is still open.
Next session. Frame the roof and install the vents while everything is still open.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Frame the roof and install the vents

Build Order 5 · While the building is still open

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Frame the roof, leaving the stack opening, and install the adjustable intake, exhaust, and dampers before you close anything in. The book's Build Order puts these two steps back to back for that reason.

Not this session. Do not close the outside or the roof until the intake, exhaust, and dampers are in. Do not let a rafter land where the stack needs to pass.

MATERIALS FOR THIS SESSION

- [ ] 2×4 lumber for roof framing (Chapter 15 list)
- [ ] An adjustable intake low on one side, about 12 to 20 square inches in the sample design, with a slide damper (Chapter 15)
- [ ] A 6-inch stovepipe exhaust with a damper at the high side of the roof, extending a couple of feet above it, and a cap (Chapter 15)
- [ ] Stainless or steel insect screen on both vents (Chapter 15)

CUTS / LAYOUT

Decide where the exhaust stack goes before you frame the roof so a rafter doesn't land where the stack needs to pass. Leave the stack opening. (Chapters 10 and 15)

TOOLS

Tin snips for roofing and sheet steel later
Drill, squares, and a 4-foot level

BEFORE YOU START

- [ ] The sample vent sizes (about 12 to 20 square inches of intake; 6-inch stovepipe exhaust) are from the Chapter 15 design, not a certified plan. Check them against your drawing and local rules.

STEPS — IN THE BOOK'S ORDER

1. Decide whether you are framing a single-slope shed roof or a gable, and mark the stack opening before you cut. (Chapter 10)
2. Frame the roof. Leave the stack opening. (Chapter 15)
3. Install the intake, exhaust, and dampers while everything is open. Both screened. (Project on One Page; Chapter 15)

SITE / RULE QUESTIONS

- [ ] Is the stack opening in the roof before the rafters are all fixed?
- [ ] Are both vents adjustable and screened?

Done when. The roof is framed with a stack opening, and the intake, exhaust, and dampers are installed and screened.
Next session. Close in the outside and the roof; rough in power if you are going electric.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Close in and weatherproof

Build Order 6 · After the vents are in

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Close in the outside and the roof, flash the bottom edge, and get the building weathertight. If you are going electric, rough in the power before you finish the interior.

Not this session. Do not line the inside until the building is weathertight. Do not let siding wick water off the slab. If you need a licensed electrician, this is the moment to have the rough-in done — not after the liner is up.

MATERIALS FOR THIS SESSION

- ☐ Outside boards or siding, weather barrier, and metal flashing (Chapter 15). Cedar or redwood boards, or exterior plywood with a weather barrier and metal or fiber-cement siding, are the book's options. (Chapter 10)
- ☐ Metal roofing panels and matching screws. Use plain or painted steel near a hot stack rather than galvanized. (Chapters 10 and 15)

CUTS / LAYOUT

Keep the bottom of the siding a couple of inches above the slab so it doesn't wick water, and flash the joint. (Chapter 10)

TOOLS

Tin snips
Drill and driver
Safety glasses, gloves, and hearing protection

BEFORE YOU START

- ☐ Outdoor-rated, ground-fault protected circuits only (Chapter 24).
- ☐ Plan the stack and roofing so galvanized steel is not sitting against a hot stack (Chapter 10).

STEPS — IN THE BOOK'S ORDER

1. Close in the outside and the roof. Flash the bottom edge. Get it weathertight. (Chapter 15)
2. Rough in power if you're going electric. Outdoor-rated, ground-fault protected circuits only. (Chapters 15 and 24)

SITE / RULE QUESTIONS

- ☐ Is the bottom of the siding flashed and held a couple of inches above the slab?
- ☐ If you are going electric, is the rough-in being done by someone qualified, on a GFCI-protected outdoor-rated circuit?

Done when. The building is weathertight, flashed at the slab, and any electric rough-in that you need is in.
Next session. Insulate if you are going to, then line the interior and install racks and ports.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Line the interior, racks, and ports

Build Order 7 · After the building is weathertight

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Line the chamber with untreated boards, put non-combustible shielding on spacers near the heat, and install rack rails, hanging-bar cleats, and probe ports.

Not this session. Do not use particleboard or OSB inside the chamber. Do not use treated lumber where smoke touches. Do not skip the air gap behind shielding where fire or hot metal is near wood.

MATERIALS FOR THIS SESSION

- [ ] Inside boards: plain, untreated pine or fir (Chapters 10 and 15)
- [ ] Optional mineral wool batts if insulating, sealed completely behind the liner so no fibers reach the food, kept away from the firebox. Strongly recommended for electric heat or winter use. (Chapters 10 and 15)
- [ ] Sheet steel or cement board for shielding, with non-combustible spacers (Chapter 15)
- [ ] Stainless or expanded-steel racks and angle iron for rails; a hardwood or stainless hanging bar and steel cleats; probe ports at the middle and top rack in the sample design (Chapter 15)

TOOLS

Drill and driver
Tin snips for sheet steel

BEFORE YOU START

- [ ] Heat shielding with an air gap wherever fire or hot metal is near wood (Project on One Page).
- [ ] If you insulate, seal it completely so no fibers reach the food, and keep it away from the firebox (Chapter 10).

CUTS / LAYOUT

The sample inside layout is rails for five racks, a hanging bar in notched cleats, a water-pan position, and probe ports at the middle and top rack. Cut from your drawing.

STEPS — IN THE BOOK'S ORDER

1. Insulate, if you are, with a non-combustible type such as mineral wool, sealed behind the liner. (Chapters 10 and 15)
2. Line the inside with plain untreated boards. Anywhere near open flame or hot metal gets a non-combustible lining spaced off the wood. (Chapters 10 and 15; Project on One Page)
3. Install rack rails, the hanging bar cleats, and probe ports. (Chapter 15)

SITE / RULE QUESTIONS

- [ ] Is every surface the smoke touches untreated wood or metal — not OSB, particleboard, or treated lumber?
- [ ] Is there an air gap behind shielding wherever heat is near wood?

Done when. The interior is lined, shielding is in with an air gap, and rails, hanging-bar cleats, and probe ports are installed.
Next session. Build and hang the door.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Build and hang the door

Build Order 8 · After the opening is finished

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Build a door that seals and still opens easily, with a correct diagonal brace, hang it on strap hinges, and fit a mid-height latch and a high-temperature gasket. The book warns that the door takes longer than you expect.

Not this session. Do not skip the gasket or the brace. A door that won't seal leaks smoke and lets in air you didn't plan for.

MATERIALS FOR THIS SESSION

- ☐ Boards for a board-and-batten door with a correct diagonal brace (Chapter 15)
- ☐ Three strap hinges, a latch or hasp near mid-height, and high-temperature door gasket (Chapter 15)

CUTS / LAYOUT

Build the door to the opening you already framed, not to a guessed size. The book says this is harder than it sounds.

TOOLS

Clamps, squares, drill, and a 4-foot level

BEFORE YOU START

- ☐ The stack, door hardware, and racks will all get hot in use. A door that seals is also a door you can latch when you leave (Chapters 15 and 24).

STEPS — IN THE BOOK'S ORDER

1. Build the door: board-and-batten with a correct diagonal brace. (Chapter 15)
2. Hang it on three strap hinges. Fit a latch near mid-height and a high-temperature gasket. (Chapter 15; Project on One Page)
3. Check that it seals and still opens easily.

SITE / RULE QUESTIONS

- ☐ Does the door seal on the gasket without binding?
- ☐ Is the latch near mid-height, as the book describes?

Done when. The door hangs square, seals on the gasket, latches near mid-height, and opens easily.
Next session. Set up the heat source.

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Set up the heat source

Build Order 9 · After the chamber is closed and the door hangs

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Install the heat source the way you planned it — propane with the tank outside and a leak test, or a smoker-rated electric element, controller, and GFCI circuit — under a steel baffle and drip pan in the sample design. Add a smoke generator if you want cold smoke.

Not this session. Do not run a burner, smoker, or smoke generator in a garage, shed, or any enclosed space not built for it. Do not put the propane tank inside the chamber. The sample design skips the outside firebox to keep the build simple; if you want a wood firebox later, the book says to frame a capped opening low in the back wall as a second phase.

MATERIALS FOR THIS SESSION

- [ ] Heat source from your plan: propane burner with safety shutoff, regulator, and hose; or a smoker-rated electric element and controller (Chapter 15)
- [ ] Steel baffle plate, drip pan, and water pan (Chapter 15)
- [ ] Smoke generator tube or maze for cold smoking (Chapter 15)
- [ ] Multi-probe thermometer and silicone probe grommets (Chapter 15)

CUTS / LAYOUT

None, unless you are adding the later wood-firebox opening the book describes as a second phase.

TOOLS

Leak-test solution for propane
The electrician's tools if this is an electric install

BEFORE YOU START

- [ ] Wood, charcoal, and propane fires all produce carbon monoxide. Don't stand or work inside a walk-in smokehouse while the fire is burning. Never run a smoker, burner, or smoke generator in a garage, shed, or any enclosed space not built for it. (Chapter 24)
- [ ] Keep an extinguisher rated for ordinary combustibles at the smokehouse, plus a charged hose if you can. (Chapter 24)
- [ ] Leak-test propane connections every time. Close the tank valve when you're done. (Chapter 24)

STEPS — IN THE BOOK'S ORDER

1. Set up the heat source at the bottom center under a steel baffle and drip pan, as in the sample design — or follow the wood-firebox path if that is what you planned and the book's Chapter 13 details. (Chapter 15)
2. Propane: keep the tank outside and leak-test the connections. (Chapters 15 and 24)
3. Electric: element, controller, and a GFCI circuit. Outdoor-rated, ground-fault protected circuits only. (Chapters 15 and 24)
4. If you want cold smoking, set a smoke generator on the floor or lowest rack with the main heat off. (Chapter 15)
5. Fit the thermometer probes through the ports.

SITE / RULE QUESTIONS

- [ ] If this is propane, is the tank outside, and have you leak-tested every connection?
- [ ] If this is electric, is it on an outdoor-rated GFCI-protected circuit?
- [ ] Is heat shielding still in place with an air gap wherever hot metal is near wood?

Done when. The heat source is installed the way you planned it, shielding and baffle are in, propane has been leak-tested or the electric circuit is GFCI-protected, and a thermometer is in the ports.
Next session. Commission the smokehouse — test fires with no food (Chapter 16).

LEFTOVER MATERIALS _____ DATE FINISHED _____

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MEMBERS VAULT · BACKYARD BUILD PLAN

Session — Commission: test fires, no food

Build Order 10 · After the heat source is in, before any real smoke

DATE _____ HELPERS _____ WEATHER _____

THIS SESSION'S AIM

Run two or three test fires with no food, map the hot and cool spots, write down vent settings that hold 150°F, 225°F, and 275°F, and read the food-safety and curing chapters before you cure or cold smoke anything.

Not this session. Do not put food in on the first fires. New wood holds moisture and sap; new metal carries mill oil. If any wood on the outside near the heat is too hot to keep your hand on, stop and add shielding or distance.

MATERIALS FOR THIS SESSION

- [ ] Multi-probe thermometer, at least four probes for mapping (Appendix D)
- [ ] The log page in Appendix F
- [ ] Hot, soapy water for washing racks and metal parts

CUTS / LAYOUT

None.

TOOLS

Heat-resistant gloves and long tongs

A fire extinguisher and a metal ash can with a lid (Appendix D; Chapter 24)

BEFORE YOU START

- [ ] Don't stand or work inside a walk-in smokehouse while the fire is burning. Open the door, let it air out, and keep visits short. (Chapter 24)
- [ ] Keep the area around the building clear of dry grass, leaves, needles, and brush. Store firewood and propane away from the heat. (Chapter 24)
- [ ] Shovel ash into a metal can with a tight metal lid, set it on bare ground or concrete, and wait several days before dumping it. In wildfire country, soak it first. (Chapter 24)
- [ ] Check fire restrictions before every smoke in the dry season. (Chapter 24)

STEPS — IN THE BOOK'S ORDER

1. Wash racks and metal parts with hot, soapy water. Rinse and dry. (Chapter 16)
2. Run a low fire for a few hours. Watch for smoke where it shouldn't be. Feel the outside walls near the heat source. If any wood is too hot to keep your hand on, stop and add shielding or distance. (Chapter 16)
3. Run a second, hotter fire and hold it steady for at least an hour. (Chapter 16)
4. Map the chamber: probes at the four corners and center of the bottom rack, the center of the middle rack, and the center of the top rack, all in free air, not touching metal. Bring the chamber to 225°F at your main probe, hold 30 minutes, and record every reading. Repeat at 160°F if you plan to make sausage. (Chapter 16)
5. Build a vent chart. Hold 150°F, 225°F, and 275°F and write down the intake and exhaust settings, the burner setting or fuel load, and the outside temperature and wind. Do it again on a cold day. (Chapter 16; Project on One Page)
6. If you plan to cold smoke, run the smoke generator alone on a typical day for your season and log chamber temperature against outside temperature every 30 minutes. (Chapter 16)
7. Fix leaks, binding doors, undersized vents, and hot spots while the racks are empty. (Chapter 16)
8. Read the food-safety and curing chapters before you cure or cold smoke anything. (Project on One Page)

SITE / RULE QUESTIONS

- [ ] Have you written down vent settings for 150°F, 225°F, and 275°F?
- [ ] If any exterior wood near the heat was too hot to touch, have you added shielding or distance?
- [ ] Have you read the food-safety and curing chapters before the first real smoke?

Done when. Two or three test fires are done, the chamber is mapped, vent settings are written down, any hot-spot or leak fixes are made, and the food-safety chapters have been read. The first real smoke is in the book — not on this sheet.
Next session. Your first real smoke, following Chapters 15 and 20, only after commissioning is honestly done.

LEFTOVER MATERIALS _____ DATE FINISHED _____

These sheets are a planning companion to the matching book. They are not engineering, structural, electrical, or safety advice and not a substitute for local codes, permits, or a qualified professional. Measurements, materials, and safety notes must come from the book. Do not build from a blank field. Chapter 15 is a starting point you can adapt, not certified plans.

MEMBERS VAULT · BACKYARD BUILD PLAN

Materials list

Chapter 15 sample — quantities depend on your drawing

Figures on these sheets are from the book's sample 4-by-4-foot wood-frame smokehouse (about 6 feet of clear height) in Chapter 15, with a 5-by-5-foot, 4-inch slab. The book says quantities depend on your exact dimensions — work out real numbers from your own drawing. Check the design against your local codes before you build. The book also says many builders land between about $800 and $3,000 for a small wood-frame smokehouse, and to add 15 percent for what you'll forget. Price your own list locally.

CHAPTER 15 MATERIALS LIST — SAMPLE 4-BY-4 DESIGN

Item	Book figure or note
Concrete for a 5-by-5 slab with thickened edges	15 to 20 bags of 80-pound premix, plus rebar or mesh, form boards, and stakes
Gravel for the base	As needed for a compacted base (Chapter 9)
Anchor bolts and sill gasket	Set bolts in the wet concrete
2×4 lumber	Sill, studs, plates, and roof framing — from your drawing
2×6 for the door header	Doubled, as in Chapter 10
Outside boards or siding, weather barrier, flashing	From your drawing
Inside boards: plain, untreated pine or fir	From your drawing
Mineral wool batts	If insulating
Metal roofing panels and matching screws	Plain or painted steel near a hot stack
Sheet steel or cement board for shielding	With non-combustible spacers
6-inch stovepipe with damper and cap	Plus a slide damper for the intake
Stainless or steel insect screen	On both vents
Strap or T-hinges, latch or hasp, high-temperature gasket	Three strap hinges in the sample door
Racks, rails, hanging bar and cleats	Stainless or expanded-steel racks; hardwood or stainless bar
Steel baffle, drip pan, and water pan	Sample heat setup
Heat source	Propane burner with safety valve, regulator, and hose; or smoker-rated element and controller
Smoke generator tube or maze	For cold smoking
Multi-probe thermometer and silicone grommets	At least four probes for mapping
Exterior-grade screws	From your drawing

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Tools and smoking gear

Appendix D

From Appendix D of *Building Your Backyard Smokehouse*.

TOOLS

- [ ] Circular saw and hand saw
- [ ] Drill and driver with bits
- [ ] Framing square, speed square, and tape measure
- [ ] 4-foot level and string line
- [ ] Chalk line, pencil, and utility knife
- [ ] Hammer and chisel
- [ ] Clamps
- [ ] Wheelbarrow, shovel, rake, and hand tamper
- [ ] Concrete float and edger
- [ ] Tin snips for roofing and sheet steel
- [ ] Safety glasses, gloves, and hearing protection

SMOKING GEAR

- [ ] Multi-probe wireless thermometer, at least four probes for mapping
- [ ] Instant-read thermometer
- [ ] Scale reading to 0.1 gram for cure
- [ ] Pin-type wood moisture meter
- [ ] Heat-resistant gloves and long tongs
- [ ] Drip pans, water pan, and steel baffle
- [ ] Smoke generator tube or maze
- [ ] Sausage sticks and S-hooks
- [ ] Butcher paper and heavy foil
- [ ] Insulated cooler for resting and holding
- [ ] Fire extinguisher and a metal ash can with a lid

A NOTE ON THE LATER WOOD FIREBOX

The sample design skips the outside firebox to keep the build simple. If you want wood-fired cold smoking later, the book says to frame a capped opening low in the back wall and add a firebox and pipe as a second phase. (Chapter 15)

These sheets are the working copy. The method, the why, and the full detail stay in Building Your Backyard Smokehouse.

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