

## Chapter 1

# Flocking to Your Own Chicken Coop

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### *In This Chapter*

- ▶ Thinking through coop basics
  - ▶ Looking at tools and building materials
  - ▶ Constructing your coop step-by-step
  - ▶ Deciding on a coop style
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**R**egard it as just as desirable to build a chicken house as to build a cathedral.” A lovely sentiment? Yes. A bit overly dramatic? Perhaps at first glance, until you consider who said it. That quote is attributed to none other than Frank Lloyd Wright, the most famous and celebrated architect in American history. Thinking about a “chicken house” a little differently now?

You obviously take the idea of a chicken coop more seriously than most, or you wouldn’t have picked up this book. While we’ve packed the chapters that follow with everything you need to know about how to design and construct your own coop, this chapter serves as your crash course in what you need to know to build a chicken house that even Frank Lloyd Wright would be proud of.

## *Understanding the Basics of Housing*

A chicken coop is, at its most basic and fundamental, a shelter for your birds. It can be Spartan in its simplicity, a modest or even crude structure that serves its intended purpose but will never make the cover of *Better Coops and Gardens*. Or it can be grand and elaborate, intricately designed, and built from the finest materials, featuring all the bells and whistles imaginable.



While the aesthetics may mean a great deal to you and your family as you embark on your coop-building adventure, the chickens, quite frankly, couldn’t give a cluck. To your birds, a new chicken coop needs only to have a few select things going for it. These basics are explored more in-depth in Chapter 2 and throughout this book, but here’s a quick list of what you need to consider before you start building a coop or settle on a specific design:

- ✔ **Shelter:** Even wild chickens take cover when the weather turns nasty. If you're going to keep chickens in your suburban backyard, you have to give them a place where they can find shelter from rain, wind, and cold.
- ✔ **Protection:** Humans aren't the only carnivores who enjoy a finger-lickin' good chicken dinner every now and again. A primary requirement of any coop is that it effectively offers protection from predators.
- ✔ **Space:** We say it often in this book because it's a golden rule to always keep in mind: Your coop should provide 2 to 4 square feet of floor space for each bird you keep.
- ✔ **Lighting:** Chickens need around 14 hours of sunlight every day. They aren't always able to get all of it outdoors. Whether it's via a window, a door, or a skylight, your coop needs to allow some light inside.
- ✔ **Ventilation:** Chickens poop. Often. Wherever they happen to be when nature calls. The coop will get stinky. You can't prevent that, but you must exhaust that ammonia-saturated air for the health of you and your birds.
- ✔ **Cleanliness:** Once again, chickens poop. The coop will get messy. You need to think through how you, their caretaker, will take care of that dirty job on a regular basis.

## *Looking at the Gear You'll Need*

We'll be honest: You don't have to construct your own coop. Lots of great companies are out there who will deliver one in any size you need, ready for your flock to move into straight off the truck. Or you can easily hire a local builder, contractor, or handyman to erect one for you. The only tool you need for these options is a major credit card.

But many chicken owners love the challenge, the considerable cost savings, and the hands-on involvement of building their own coop. (We're guessing that at least one of these things appeals to you, too, or you wouldn't be reading this book.)

Building your own chicken coop may not be as easy as placing an order for a prefab unit, but it's not as difficult as you probably think, either. You don't necessarily need a garage full of professional-grade specialty gear (although a few strategically-chosen power tools can make the work easier, quicker, and more fun). We dive into tools in Chapter 3, but here's a brief checklist of the stuff you really need to have if you want to build your own chicken coop:

- ✔ **Safety gear:** Gloves, goggles, earplugs, and a tool belt keep you in the backyard building a coop and raising chickens instead of racing to the emergency room.
- ✔ **Garden tools:** If your coop site is currently occupied by a flower bed or a years-old pile of yard debris, you'll need to do some clearing. A rake and a shovel should suffice in most instances. A mattock (which we cover in more detail in Chapter 3) can chop through buried tree roots.
- ✔ **Tape measure and pencil:** Without these essential items, you're just guessing at how long a piece of lumber is or where you need to cut it.

- ✔ **Saw:** Pick your poison — from circular saws to jigsaws, reciprocating saws to table saws, miter saws to handsaws, there are dozens of ways to cut a piece of wood. You'd better have at least one that you feel completely comfortable and fairly adept with.
- ✔ **Tools for putting in posts:** You may need to dig a few postholes, either for anchoring timber posts that support an elevated walk-in coop or for the fence posts that define your coop's chicken run. If postholes are in your future, have a posthole digger or a power auger at the ready. (You'll probably also need a wheelbarrow and a long-handled tool like a shovel for mixing up and pouring concrete.)
- ✔ **Hammer:** The most basic tool of them all is still the one that most coop-builders use most often. Find one you'll be able to swing all day long (but also consider a pneumatic nail gun!).
- ✔ **Drill:** Whether you use it to drive screws or to bore small pilot holes, a powerful drill (preferably with multiple torque settings) is often the only tool that can do the job at hand.
- ✔ **Level and square:** These tools are used in conjunction with one another as you build, to make sure that all your boards and cuts are straight.
- ✔ **Tools for working with wire:** Wire mesh is used to enclose a chicken run or, sometimes, to cover gaps on the coop itself. A sturdy pair of tin snips will help you cut the mesh to whatever size and shape you need.
- ✔ **Miscellaneous tools:** In addition to the basics already listed, there's a good chance you'll also find a need for things like a utility knife, a pair of sawhorses, and a screwdriver.

## Choosing Coop Materials

Chicken owners, by nature, seem to be scroungers, savers, and scavengers. Chicken coops, as a result, are often constructed out of a potpourri of materials — old wooden pallets broken down into individual boards, leftover plywood from a past renovation, mismatched paint from half-empty cans in the basement, spare parts and pieces accumulated over time. These recycled and repurposed one-of-a-kind coops lend each henhouse an improvised, personal touch and are part of what makes raising backyard chickens such a fascinating hobby for so many.

But if you're constructing a coop from scratch, without the benefit of a pre-existing pile of building materials, you have some decisions to make. Chapter 4 takes a long, hard look at the different options you'll encounter at the lumberyard, building supply center, or neighborhood hardware store. In the meantime, refer to this short list of the basic materials you'll need to obtain in order to craft a coop of your own:

- ✔ **Board lumber:** The framework of almost every coop we've ever seen is made up of board lumber. The most common cut is the 2x4, but the slightly smaller 2x3 can help you shave per-board costs and cut down on the coop's overall bulk and weight. You may need 2x6s for things like floor joists. If you're elevating your coop off the ground, 4x4s make good corner posts. And thin boards like 1x4s or 1x3s come in handy as trim pieces for doors, windows, and various coop features.

- ✔ **Sheet lumber:** If board lumber composes the “skeleton” of the coop, sheet lumber like plywood is often used to create the “skin.” Large pieces (often 4 x 8 feet) come in thin sheets and are used for exterior cladding as well as flooring and roof sheathing.
- ✔ **Fasteners:** To put the pieces together, you’ll need either nails or screws. Both have pros and cons, and a vast array of fastener types is available to choose from. Don’t overlook their importance: It would be a shame for your coop to collapse because you cheated out on the wrong kind of nails.
- ✔ **Flooring materials:** Almost all coop owners cover the floor of their shelter with some sort of loose bedding, like pine shavings. But underneath that bedding, many coop floors feature a smooth layer of linoleum (or a similar product) to make cleanup even easier. Some coop setups may utilize a concrete or dirt floor.
- ✔ **Materials for walls:** The coop’s solid exterior walls are most often made from sheets of thick plywood, either smooth-surfaced or with vertical grooves to create a paneled look. If you’d like to use a siding product similar to what you’d use on a house, see Chapter 8.
- ✔ **Roofing materials:** Shingles are the classic choice for a roof, but many coop-builders use large corrugated panels of metal, fiberglass, or PVC to encourage rainwater to shed away from the coop structure.
- ✔ **Wire mesh:** This material is so closely associated with chicken coops that “chicken wire” has become a catchall term that some use to refer to any type of flexible, metal-wire mesh. It’s used primarily to enclose runs or to provide an open-air screen for the windows or doors of a shelter.
- ✔ **Posts:** Whether they’re supporting the entire structure of an elevated coop or used in a fencing application on a chicken run, posts need to be beefy enough to support the load. The most popular builder’s choice is 4x4 lumber.

## *Getting Up to Speed on Carpentry*

You don’t have to be Bob Vila (or Ty Pennington, for you younger readers) to construct a quality coop that your chickens will love and you’ll love to show off. But you do need to have a handle on some basic carpentry skills that are instrumental in any building project.



If you’re a do-it-yourself (DIY) rookie or doubt your carpentry skills, take advantage of the years of experience and volumes of knowledge of the employees working the aisles of your local hardware store or home center. They’re usually more than happy to walk you through a specific skill or teach you how to use a certain tool. Some of the larger building supply warehouse stores even hold free clinics on all kinds of how-to topics and let you try out a tool or technique in a safe, supervised environment.



We've devoted Chapter 5 of this book to the skills you'll want to master before kicking off your coop-building project. Take a look at this list to see what you may need to brush up on before the sawdust starts flying. You should know how to



- ✓ **Accurately read your tape measure:** Reading the big, fat numbers is easy. But can you differentiate at a glance between  $7\frac{7}{8}$  inches and  $7\frac{1}{16}$  inches? The difference is only the width of this capital F, but it could inspire a few choice words that start with that same letter when two pieces don't fit together because you guessed wrong.
- ✓ **Precisely mark materials:** From making simple slash marks with a pencil to snapping chalk lines, how you mark a piece for cutting usually determines how accurate the cut is. Mark with a "V" for accuracy, and use an "X" to identify scrap ends.
- ✓ **Safely use a saw to cut lumber:** Power saws can make short work of a 2x4 or sheet of plywood. But they can also make short work of your index finger or thumb if you're not careful. Check for obstacles in the saw blade's path before starting a cut. Understand how to hold a saw, where to look at your workpiece for the best view, and how to stand during the cut to maintain good balance. Always properly support the piece you're cutting.
- ✓ **Properly use a hammer:** Banging a nail flat into a piece of wood is one thing. Gripping the hammer low on the handle and swinging from the elbow instead of the wrist can make it an even easier thing. Toe-nailing a nail into a tight corner or using the claw end to pull out a mistake takes your nailing know-how to a whole different level.
- ✓ **Read a level:** A simple carpenter's level shows whether the piece you're installing is perfectly horizontal (*level*) or precisely vertical (*plumb*), but only if you can interpret what the bubble in the vial is telling you.
- ✓ **Use a square:** The speed square is a versatile tool that can lay out straight pencil lines, establish perfect 90-degree angles, and act as a straightedge or cutting guide for your saw. You can also use the etched markings on the angled side to mark an angle — anywhere from 1 to 89 degrees — with ease, an invaluable skill when laying out and cutting roof rafters.
- ✓ **Use a drill:** Whether you're driving wood screws during framing, boring pilot holes in a stubborn piece of lumber, or attaching hardware at project's end, using a drill is usually as easy as squeezing the trigger. But you should be familiar with your drill's particular torque settings and other features before embarking on a big building project.

## Constructing a Coop: The Nuts and Bolts

The building process, for a chicken coop or anything else, is rarely a quick one. Nor should it be. "Haste makes waste," as they say, and if you try to hurry your way through coop construction, it'll almost certainly show in the end. Be realistic about how long the build will take . . . and then add some

additional time on the back end for good measure. If you estimate it'll take you two weekends, plan on a third just in case.

Part II of this book breaks down the build into phases. Not every phase applies to every coop design, so you may be able to skip a phase here or there. But generally speaking, the following sections give you a step-by-step rundown of how to construct your chicken coop.



Coordinating your construction efforts with your chickens' readiness can be tricky, but considering this factor is critically important. The day you bring home a box of fully-grown adult chickens is not the day to start thinking about what kind of coop you want to build. The ideal scenario is to have your coop built and finished just as your chicks are ready to move in. It doesn't always work that way, of course, so be sure to make some temporary housing arrangements for your flock before you begin building their permanent housing.

## *Readying the site*

It starts with picking the perfect location, something that Chapter 2 deals with at length. But the ideal spot may be on a rocky portion of uneven ground, underneath a massive tree with an exposed root system and low-hanging branches, or even on a sloping hillside.

If you're lucky, you'll have very little site prep to do — maybe just some light debris cleanup, relocating a few plants, or a bit of minor regrading of soil. If you have a nice patch of flat ground, you may not have to do any site prep at all.

But you may need to consult Chapter 6 for a look at how to level the ground using stakes and a string level. On more serious slopes or for a coop that will be elevated on permanent posts, you'll have to do some heavy lifting. You may need to dig post holes and pour concrete to create *footings* — concrete pillars buried in the earth that support your structure's timber legs.



Of course, some chicken coops don't occupy just one spot in the yard. Many caretakers move their coop from place to place on the property to let the birds work different patches of ground with their pecking and scratching, or just for a change of scenery (yours as well as theirs). While some "tractor" coops are built on heavy skids or with wheels, many smaller coops can also be moved around pretty easily if they're solidly built to begin with. Of the five coops we provide plans for in Part III, three of them are designed to be portable. Chapter 2 introduces tractor coops and other styles.

## *Framing*

The framing may not be the part of your coop that you'll see every day as you look out your kitchen window, but it's quite literally the backbone of your chickens' housing. The frame is the skeleton that everything else is built on, so if it's not solid and sound, you may be in for a difficult build and long-term problems with the coop's stability.

The framing is made up of three basic parts: a floor, walls, and a roof. On all three parts, you typically begin by constructing a network of framing members, most often 2x4s:

- ✔ **The floor:** Floor joists provide support for a solid decking material that becomes the floor.
- ✔ **The walls:** Vertically-arranged studs provide rigidity for exterior walls; doorways, window openings, and access hatches all have their own stud framing that gives them the strength to stand up to daily use.
- ✔ **The roof:** Rafters give solid backing to sheets of roofing material.



Framing is the most basic of carpentry tasks and a great place for the building beginner to practice sawing, hammering, and leveling skills. While being accurate with measurements and cuts is important, most framing is covered up by something else, so absolute perfection is seldom required. (But Chapter 7 has everything you need to know about how to get it as perfect as you possibly can.)

## *Putting up walls, a roof, and more*

After you've completed the framing of the coop, you'll be ready to enclose the shelter with exterior surfaces. Chapter 8 details the ins and outs of adding walls, doors, windows, a roof, and ventilation to your coop. Here are some basics:

- ✔ **Walls:** Plywood is the wall material of choice for most coop-builders, but different kinds of siding can be used instead (although some have their own specific framing requirements).
- ✔ **Doors:** Nearly every coop has to have some kind of access door — for humans, chickens, or both. The majority of coop-builders choose to build their own door from scratch, using the same general framing and cladding skills that they've demonstrated up to this point in the build. This allows the DIYer to custom-make a door that perfectly fits not only the opening in the coop, but the way it will be used day in and day out.
- ✔ **Windows:** When it comes to windows, some people like to keep it super-simple by fastening wire mesh over an opening for a permanent screen effect. Many folks build mini-doors or hatches that can be propped open or latched closed. Others use actual window units like you have in your own house; many of these were once working house windows, now recycled for a second life in a coop.
- ✔ **A roof:** First and foremost, a roof must keep the interior of the shelter dry. Plywood sheathing and asphalt shingles do the job for most coops, although corrugated panels offer some nice benefits that appeal to many chicken-owners.
- ✔ **Vents:** Ventilation is often built into the roof structure by way of ridge vents or the fancier cupola, but many coops add simple vents into the shelter walls to help stale, stinky air escape the confines of the coop.

## Adding special touches

At this point in the building process, you have a big box. It takes a few extra creature comforts to turn that box into a chicken coop. The following easy-to-build pieces are explored more thoroughly in Chapter 9:



- ✓ **Roosts:** A *roost* is, at first glance, a simple bar or pole inside the shelter that replicates the tree branch that your birds instinctively want to perch on at night. Provide 12 inches of roost per bird, and place the roost bar as high off the ground as your coop design allows. Steps (or other roosts to be used as steps) can often help the hens make their way up to their perch at night.

The area directly below the roost gets the most chicken poop, so pay extra-special attention to where you place your roost. Open-top nest boxes and food or water containers should never be placed in the “drop zone.” In fact, savvy coop owners design the coop specifically with the logistics of future cleanups in mind.

- ✓ **Nest boxes:** Birds being kept for eggs should be given nest boxes. Hens will share a nest box, so plan on having one for every two to three birds. Each box should be a minimum of 12 x 12 inches, or larger if possible. Nest boxes can be completely contained within the shelter, but many caretakers build a bank of nest boxes that stick out of an exterior coop wall, with a lid that can be lifted from outside the shelter to access the eggs.
- ✓ **Ramps:** Some coops may require a ramp that offers the flock a way to get down out of the coop and into the run or yard. These simple ramps often feature rungs that give the birds’ feet something to grip as they make their way up and down.

## Building a run

Of our five coop designs in Part III, three incorporate a run into the structure itself. But a stand-alone shelter needs an attached run, an enclosed outdoor area where the chickens will spend their days hunting and pecking. Factor in 3 to 6 square feet of run per bird, although more is always better.



First-time coop-builders should think of the fencing material that makes up the run not only as something that keeps chickens in, but also that which keeps hungry predators *out*. Lightweight netting or flimsy chicken wire is rarely enough; plan on stretching heavy-duty, welded wire with small openings between posts that are solidly anchored and securely fastened.

Many caretakers also rig up fencing material over the top of the run to thwart airborne attacks. See Chapter 10 for much more about building a run.

## Hooking up electricity

Running an electrical line to a chicken coop is an expense that many caretakers are reluctant to consider. Chicken owners who already have power in their poultry pen will tell you it’s worth every penny. After reading Chapter 11,



you might think so, too. From simple task lighting to space heaters to turbine fans that exhaust stale air, electricity can spark all kinds of ways to make your coop cleaner, better, and easier to maintain.



Messing around with wiring, though, is a potentially dangerous endeavor for many weekend warriors. If you like the idea of having juice in your coop, think about hiring a professional electrician to take care of it.

## Checking Out a Few Coop Designs

Part III is what really sets this book apart. That's where we provide full building plans for five different chicken coops; at least one should fit the needs of any urban chicken-keeper. Chapters 12 through 16 contain full materials lists, cut lists, and assembly instructions — all with detailed illustrations to guide you through each cut and every connection.

In a nutshell, here are the five coops you'll be able to build by the time you reach the end of this book:

- ✔ **The Minimal Coop:** Our smallest coop, in Chapter 12, is for the do-it-yourselfer who doesn't want to do all that much. It uses basic pieces of lumber and requires only simple straight-line cuts — and as few of both as humanly possible. This no-frills “starter” coop houses four to five birds but doesn't include a run.
- ✔ **The Alpine A-Frame:** Another small coop, for two to four birds, the plan in Chapter 13 requires even less material to build the shelter, thanks to an A-frame design. A hinged roof panel allows easy caretaker access. A 24-square-foot run is attached to this self-contained coop, and attractive exterior siding makes it a nice addition to the landscape.
- ✔ **The Urban Tractor:** Specifically designed to be relocated around your property via a heavy tow chain, this coop (featured in Chapter 14) incorporates a shelter that accommodates two or three birds and a 16-square-foot run in a portable unit. Part of the run extends underneath the elevated shelter to provide your hens a shady spot to chill out on hot summer days.
- ✔ **The All-in-One:** Combining the best features of all coop styles, this coop (shown in Chapter 15) is small enough to be portable, yet tall enough that the caretaker can step into the attached run and stand upright. The shelter can accommodate four to six chickens, yet occupies a smaller footprint than the Alpine A-Frame coop.
- ✔ **The Walk-In:** Our largest coop (shown in Chapter 16) is for chicken owners who want to start out with a big flock or just increase their existing bird count. The 8-x-8-foot shelter can house up to 30 birds at once (or fewer birds with some storage space leftover!). Building it, though, doesn't require any special skills that aren't already explained in this book.

