

A User's Guide to

Fencing & Decking

Materials



By Nick Marshall, Dave Harkins, and Rick Stanley

A Rick's Custom Fencing & Decking Resource

www.RicksFencing.com

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Introduction

Fences and decks have more in common than you might think. Both can increase property values, both are made of similar materials, and both are projects that may be tackled over a weekend or two by the do-it-yourself type.

Metaphorically speaking, these structures occupy the spaces in-between—they straddle and define the line between public and private; indoors and outdoors; familiar and stranger. Decks and fences bridge the gap between our domestic sanctuaries and the wider world.



On a more practical level, most fence builders cite Robert Frost's reasoning: *Good fences make good neighbors*. Similar axioms pop up in nearly every culture.

- *Build a fence even between intimate friends.* (Japan)
- *Love your neighbor, but put up a fence.* (Russia)
- *A hedge between keeps friendship green.* (England)

People have been erecting different forms of fences since time immemorial. Some scholars even trace the roots of civilization as we know it to the ability to mark off private land with fences.

Introduction

Outdoor living rooms, such as those created by decks, also enjoy a proud pedigree. Though architectural methods have varied, humans in moderate climates have always sought ways to define outdoor spaces. In fact, *porch* comes from the Greek word *portico*—even the ancient Greeks yearned for common outdoor areas.

The modern American deck was born when the automobile turned front-porch people watching into a thing of the past. Today, many Americans transform their backyards into inviting havens by adding a deck or pergola.

Regardless of your motivation for building a fence or deck, you will find the information you need in this eBook. Every major category of construction material is represented—including wood, composite, metal and vinyl—to help you choose the right material for you. Just turn to the corresponding chapter to discover the strengths and weaknesses of each type of fence or deck. At the end of each chapter, you'll also find a checklist with handy tips and tricks of the fencing and decking trade.

Winston Churchill once said, "We shape our dwellings, and afterwards our dwellings shape us." A gob of elbow grease may be required to erect your deck or fence, but once it's complete, you'll be able to kick back, relax and enjoy domestic bliss.



Composite deck

General Fence Building

Unique needs require unique solutions, so the first step in creating your new fence is to ask yourself what you want. Security is the number one reason homeowners cite for building a fence. In fact, this was also the earliest meaning of the word *fence*. As the Oxford English Dictionary reveals, in the Middle Ages, the word *fence* indicated “the act of self-defending.” By the 1600s, the modern meaning, “an enclosure or barrier,” had emerged. A sturdy fence protects homeowners’ rights by drawing a clear property line.



Other common motives for constructing fences include increased privacy, curb appeal, and the age-old need to create a strong enclosure for animals. A well-placed fence can also protect your home from the elements. Today, many people build fences for aesthetic reasons; fences can serve design purposes such as breaking up open spaces, echoing the design of a home and providing key outdoor vertical components.

If properly designed and maintained, your fence will be one of the most enduring, characteristic aspects of your home. Visitors may not remember the pattern of your china, but they are likely to recall your entrance gate. So it’s important to think carefully about what you want. Later in this chapter, you will find [easy-to-read-tips](#) for creating fences to fulfill each of the motivations listed above. First, take a moment to imagine your dream fence.

Questions to Ask Yourself

What is your main goal in building a fence? Try to sum it up in one word, such as *security* or *appearance*. Keep this priority word in mind as you design and construct your fence—doing so will help you make focused decisions. In the next section, you will find tips for selecting a fence based on your reasons for building one.

Are you willing to maintain your fence? Or are you looking for a “build it and forget it” structure? Some fencing materials, such as wood, require regular refinishing every few years. See the [Longevity](#) section below for more information.

What is the weather like where you live? Local weather patterns often dictate which type of material is best for your fence. For instance, wood fences are easier to maintain in arid environments, like those in the southwestern United States. Wood fence owners in muggy, moist locales must refinish more frequently, since moisture promotes mold and mildew growth within the wood. You can find more industry tips on choosing location-appropriate materials in the [Location](#) section below.

What should your fence “say” to your neighbors? Do you want to communicate a warm welcome or a warning to stay out? Does the visual appeal of the fence matter less than its utilitarian application? If aesthetics are your main concern, turn to the tips on [visual appeal](#) below.

General Fence Building

What are your landscaping concerns?

Should your fence show off the gems of your garden, or are you more concerned with shutting off the street to create a private oasis? You may be able to find the perfect color or material to match your gardening preferences.

Which views should be preserved or blocked? The height of your fence will govern which views remain visible once it is complete. If you build a solid fence, such as a flat board fence, you will block views completely, so you must be careful to set the height according to the lines of sight you wish to maintain. Alternatively, a more transparent style, such as an aluminum fence, will allow your favorite prospects to shine. (A mixture of materials, such as corrugated metal and redwood, may also allow privacy while maintaining an open feel.)

What is the style of your home? Aim to match your fence to the style of your home's exterior. If you are especially driven by design, you might choose to echo your home's architectural elements. The human eye enjoys such repetition. For instance, a mission-style wood fence might perfectly compliment your Arts and Crafts-style bungalow.



Good Neighbor cedar fence

General Fence Building

How might animals interact with your fence? Do you need to enclose farm animals, like chickens and cows, or just domestic pets, such as dogs and cats? In general, larger animals require stronger, taller fences. Look for more tips in the [Animal Control](#) section below.

Do you hope to keep certain animals *out* of your yard or garden? If so, you should design your fence with those pesky critters in mind.

What construction obstacles do you foresee? Take a walk along the fence line to figure out where challenges lie. Note any slopes, hollows, trees or other natural elements that could be sticking points. A fencing professional will have ideas on how to accommodate such quirks in your yard.

Once you have answered these questions, sketch out your fence. The more you imagine, dream and think about what you want ahead of time, the more likely you'll enjoy the final product.

The three most important fencing considerations—[longevity](#), [maintenance](#) and [location](#)—are discussed in more detail later in this chapter. Below, you will find tips to help you meet your fencing needs based on your answers to the above questions. Finally, turn to the [checklist](#) at the end of this chapter to find suggestions for selecting a fencing contractor.



Vinyl lattice top fence

Tips According to Your Goals

A fence is the perfect example of the Zen principle of marrying form and function. A well-built fence can both serve an important function and complement the aesthetics of your home. In order to get the most out of your fence, follow these tips for choosing a design that fits your need.

Enhancing Security

If your goal is to protect your property from intruders:

Design a fence that intruders can't get over, through or under. A sharp top surface (like that of a picket fence) will prevent people from getting over a fence. Ground-hugging fence designs ensure that no one can slide under.

Focus on height. A 4-foot fence is the perfect height for socializing with the neighbors, and it will also give most fence-jumpers pause. Five feet is a proficient height for most security purposes, but the 6-foot fence is even better.

Build a strong gate. In terms of security, the gate is typically the weakest part of a fence. Choose strong hinges, jimmy-proof locks and a lockable gate.

Think like a burglar. As Jeff Beneke points out in *[The Fence Bible](#)*, once a burglar is inside, a solid fence or wall may actually protect his activities from the watchful eyes of neighbors. A wrought-iron fence may be your best bet when it comes to security; wrought iron combines security and visibility—not to mention curb appeal!

Hiding an Ugly View

If your goal is to hide something you don't want to see:

Choose a privacy fence. Privacy fences, which often hide unattractive views, are typically 6 feet in height.

Combine height with visibility. You may be able to combine different fencing styles to achieve your goals. For instance, if you just need to hide a gas tank, the first 5 feet of your fence could be solid, while the upper foot of fence is lattice.

Check with utility companies. Contact any relevant utility companies to make sure your fence will allow access. If you are blocking the view of your propane tank, for instance, check with your propane company before breaking ground. (It's always a good idea to check your city or town's regulations before building a new fence. In the United States, you can do this with one phone call by [dialing 811.](#))

Check sight lines. Stretch string along sight lines to determine the right height.

Creating a Visual Boundary

Some homeowners use fences to divide their property into sections. A fence can:

Outline a garden. To remind visitors not to step on your garden, a fence doesn't need to be very high—2 feet could do the trick.

Direct traffic. A short, properly placed fence can direct visitors to take the walkway or path of your choice.

Animal Control

If your object is to keep animals in or out, the ideal height and style of your fence will depend on the type of animal you're focusing on:

Cattle. Cattle are notorious lickers, so finding cow-proof gates and latches may be your biggest fencing challenge. A 4-foot, high-tensile wire fence is usually sufficient.

Chickens. A 4-foot fence made of 1-inch wire mesh will hold chickens.

Deer. Deer are excellent vertical jumpers, so you'll need at least a 6-foot fence. A fence built at a 45-degree angle, with the high side facing the deer, will prove especially effective. Read more about [effective deer fences](#).

Dogs. A 4-foot fence is high enough to stop most small dogs; large dogs will require a 6-foot fence. Learn more specific tips for [certain types of dogs](#).

Horses. Horses are generally unwilling to jump a 4.5-foot fence, although stallions will require a 6-foot fence. A horse fence does not have to be solid; a post and rail fence should suffice. For more horse fence tips, see [How to Build Horse Fences](#).

Rabbits. A 2-foot fence made of chicken wire will stop rabbits. Be sure to include a horizontal stretch underground to prevent them from digging under the fence.

Raccoons. To keep raccoons from climbing your fence, put plastic mesh at the top so it comes loose as the animal climbs. To keep them from digging under, bury wire mesh fencing horizontally 6-12 inches underground along the length of the fence.

Controlling the Elements

With careful design and placement, a fence can:

Create shade. The shade of a fence can keep your home cooler in the summer, cutting your air conditioning costs. For the best fence placement, observe your yard throughout the day to see which areas could benefit from sun protection.

Distribute snow. If you live in a snowy area, you know what havoc snowdrifts can wreak on a yard. A tall, porous fence can protect your property by creating an eddy, which distributes the snow rather than letting it pile up. Read up on [snow fences](#).

Act as a wind breaker. A fence can weaken the wind by slowing it down. Wind-breaking fences also reduce energy costs by keeping your home warmer. To figure out the best place for a windbreaker fence, obtain a [wind rose](#) for your area. A fence made of louvered boards works well for this purpose.

Soften noise. Cedar is the best fencing material for noise proofing—it's almost as effective as concrete. Using a fence for noise reduction is not as effective as soundproofing your home, however.

Hide a pool. If you have a swimming pool, you could be accused of creating an *attractive nuisance*. You can protect yourself from lawsuits—and keep the neighborhood kids out of your pool—by building a 4-foot or higher fence that can't be climbed over or under. Design the pool gate to swing away from the pool, and choose a self-latching lock. Find more [legal tips on fence building](#).

Longevity, Maintenance and Location

Because fences are outdoor structures, they must stand up to harsh elements. Unremitting wind, heavy snow, dampness and intense sun wear away at fences—unless they are properly maintained. Keep in mind the following concerns when choosing a fencing material:



Longevity. For most people, longevity is an important consideration in selecting anything for the home. To avoid having to rebuild your fence a few years from now, set aside time to think about which materials and designs will work best for your environment. Some fencing materials last longer than others.

Maintenance. As with most possessions, the human element is the most influential factor in fence maintenance. In general, thicker coats of sealant or paint will be required in colder locales.

Location. The climate in which you're building your fence can have an impact on how it will fare over the years. You should carefully consider regional weather conditions before selecting your fencing material.

See the charts below for a comparison of fencing materials by longevity, maintenance needs and climate considerations.

Longevity

Material	Typical Lifespan	Notes & Qualifications
<u>Unfinished & Pressure-Treated Wood</u>	Decades, if you apply a finish right away and refinish every 3-4 years.	Use pressure-treated wood for any posts that come contact with the earth. Otherwise, moisture in the soil will weaken the posts, and your fence will sag.
<u>Stained Wood</u>	Your stain should last 3-5 years between applications.	Spray application is the best way to stain a wood fence.
<u>Vinyl</u>	Indefinitely.	Projectiles (such as the rogue baseball) can damage vinyl fences, so you may need to replace a part or two in the long run. Make sure your manufacturer carries a lifetime warranty on the materials. You should also clean your vinyl fence regularly.
<u>Metal</u>	A hundred years or more, assuming you protect against rust.	While wrought iron is susceptible to rust, chain link and aluminum will not rust and are more affordable. (Today, most people opt for tubular steel and aluminum systems instead of wrought iron.)
Stone	Thousands of years, if built well.	Mortared stone fences last longer than stacked stone fences, but mortar requires more maintenance.

Turn to the appropriate chapter for each material for more information on longevity.

Maintenance

Material	Maintenance Concerns	Maintenance Tips
<u>Wood</u>	Wood is affected by most every weather condition, including sun, wind, rain and snow. It's important to prevent mold and mildew from growing.	<ul style="list-style-type: none"> • Leave 2 inches of clearance between the wood and the ground. • Move any plants that impact the wood. • Keep water systems away from the fence. • Stain or seal your wood fence every 3-4 years. • Repair loose boards or post damage promptly.
<u>Vinyl</u>	Mold, dirt. Most maintenance concerns are aesthetic rather than structural.	<ul style="list-style-type: none"> • Clean with soap, water, vinegar and baking soda. • Tough stains may require a <u>more aggressive approach</u>.
<u>Metal</u>	Rust, squeaky or weak latches and fasteners, missing or broken pieces.	<ul style="list-style-type: none"> • Prevent rust by applying a rust-resistant finish. • If rust occurs, wash the area, remove the rust with steel wool or via sandblasting, and apply wax or a sealant. • Fix any broken or squeaky parts promptly.
Stone	Chipping mortar, destructive plants, loose stones.	<ul style="list-style-type: none"> • Walk the wall each spring to check for loose stones. • Chip away and replace any crumbling mortar.

See the corresponding chapter on each material for more maintenance information.

Location

Material	Climate Concerns	Tips
<u>Wood</u>	Extreme weather and changes in temperature are tough for wood fences. Very wet or very dry environments are also challenging.	<ul style="list-style-type: none"> • To prevent sun discoloration, clean regularly and refinish with a semi-transparent stain that contains an ultraviolet stabilizer. • You may want to use a power-washer to clean the wood if it's been more than two years since you last refinished the fence.
<u>Vinyl</u>	Many consumers wonder if extreme weather makes vinyl fences weak and brittle.	<ul style="list-style-type: none"> • Extreme weather doesn't affect modern vinyl fences. This was a problem with early lines of vinyl fences, but manufacturers now compensate for it, and most offer a lifetime warranty.
<u>Metal</u>	Rust, squeaky or weak latches and fasteners.	<ul style="list-style-type: none"> • Aluminum and zinc/iron alloys do not rust, which makes them great latches and fasteners. • Choose galvanized fasteners and apply a preventative coating.
Stone	Freezing temperatures, settling earth, moisture penetration, tree roots that impact stability.	<ul style="list-style-type: none"> • If a crack appears, monitor it for six months. Place a piece of tape across it; if the tape tears, the crack is still moving. If it's still moving six months later, contact a fencing contractor. • Moisture can cause white deposits to appear.

Checklist: How to Choose a Fencing Contractor

◆ **Check around.** It doesn't hurt to get estimates from several contractors; that way you can compare prices and offerings. You may also choose to contact your local Better Business Bureau. Make sure a contractor is "legit" by checking into whether they have a physical location for their business. Also, check to see if they are licensed (i.e., they have no outstanding violations with the city), bonded and insured. Make sure your contractor also knows your local fencing laws.

◆ **Compare warranties.** A 90-day warranty on labor and materials is standard in the fencing industry, although additional warranties may be available through the manufacturer.

◆ **Check references.** What do past customers have to say about the contractor? Are they pleased with their fences in the long-term? See if the contractor has a website where customers may post feedback.

◆ **Consider experience.** Many experts say consumers should look for contractors with at least ten years of experience installing fences. Ideally, the laborers installing your fence will also have at least five years of experience.



Solid style cedar fence

General Fence Building

- ◇ **See which types of fences each contractor can build.** Your contractor should be able to install wood, wrought iron, tubular, composite, chain link and vinyl. Of course, you'll also need to find out whether each contractor installs the type of fence you want. It's a good idea to ask how long your project should take.
- ◇ **Ascertain payment requirements.** Be wary if a contractor asks you to pay for the whole job up-front—after all, what's stopping him or her from skipping town with your hard-earned money? Most fencing professionals ask for half down and half later. Others require consumers to pay 30% upon placement of fence posts. Make sure you understand the terms before signing any contract.
- ◇ **Probe into the contractor's expertise.** One of the easiest ways to discover the quality of work each contractor does is to ask whether he or she uses concrete footings for fence posts. Other ways to check on the quality of craftsmanship include asking what types of fasteners are used (galvanized screws are ideal) and looking at work the contractor has done in the past.
- ◇ **Get estimates.** Each company works a little differently, but in general there are two types of bids on fencing projects: on-site or via phone or internet. Both have advantages and disadvantages. An on-site estimate may be more accurate, since the contractor can "walk the line," but a phone or email estimate is usually more convenient for the consumer. If you are opting for a remote estimate, you will need to figure out the basic dimensions of the fence you'd like to have built. (To find a comprehensive list of all the materials your project will require, try out this free [Fence Materials Calculator](#) iPhone app.)

Wood Fencing

Wood is one of the most popular materials for fencing, and for good reason—it's attractive, long-lasting (assuming it's properly maintained) and easy to work with. If you have a saw, free time, basic carpentry skills and a vision, you can build a wood fence yourself.

On the other hand, because wood is organic, it decomposes quickly without the proper care. Pines, spruces, poplars, maples and willows make poor fences because they are prone to decay, especially if in direct contact with the ground.

To protect a wood fence from the elements, a homeowner must refinish it every few years. Insects and fungi are also a problem. To combat this, you can purchase a finish that includes mildewcide or insecticide.

Another problem with wood is that it bends, twists and splinters due to ultraviolet exposure and changes in temperature and humidity. Refinishing takes care of this, but you can also head off issues down the road by building your fence with wood from a slow-growing tree. Slow-growing trees have narrower growth rings, making their wood stronger and better to build with. In general, the longest-lasting wood fences are made from cedar boards and pressure-treated posts. Another way to extend the life of your wood fence is to choose strong, galvanized fasteners.



Solid style cedar fence

What to Look For in a Wood Fence

The type of wood you choose for your fence will affect not only how it looks, but how well it will hold up over time. The species of the tree, the quality of the lumber and whether or not the wood is pressure-treated are all considerations to take into account.

Cedar vs. Other Woods

Cedar is one of the most popular fencing woods, for many reasons. First, it has great dimensional stability, meaning it is less likely to warp and twist than other woods. Second, cedar heartwood naturally contains oils that repel insects and preserve strength. Cedar's rich, honey-red tone and fresh smell are also enjoyable. Learn more about [what makes cedar so great for fences](#).

Western Red cedar is especially coveted by fencing contractors. There are many reasons for this. For one thing, it has even better dimensional stability than other types of cedar—Western Red cedar is quite strong. Additionally, Western Red cedar is perfect for damp environments such as the Northwest. *Thuja plicata*, as Western Red cedar is known to biologists, is native to the whole West Coast, so it has developed special mechanisms for handling changes in humidity. You will still have to finish and refinish a Western Red cedar fence if you want it to keep its bright color, but overall, this is the wood that does best in the wettest parts of the country. Finally, Western Red cedar is light, making it easy to work with.

Pressure-Treated Lumber

For extra resilience against the elements, some wood fences are built with pressure-treated lumber. During the pressure-treating process, chemicals such as chromated copper arsenate are forced into the wood. For this purpose, manufacturers select wood species with large quantities of sapwood, such as Southern pine, spruce, Doug fir or hemlock. This is because sapwood more readily sucks up the chemicals used in the pressure-treating process.

To avoid the danger of pressure-treating chemicals seeping into surrounding soil, many gardeners avoid this type of wood altogether. Another concern for homeowners is that a splinter from a pressure-treated fence may become infected due to the chemicals.

Different pressure-treated woods have different retention levels. A low retention rating means the wood shouldn't be in contact with the earth. Learn more by reading [Pressure Treated Woods FAQs](#).

Fence Designs That Work Well With Wood



Split rail fences. Because they were traditionally made from split logs found on the property, many ranches use split-rail fences. Cedar split rail fences are highly decorative and work well for defining property lines.

Picket Fences. Wood picket fences were once considered the American standard. Although picket fences are still popular, many homeowners now choose to build them out of vinyl rather than wood to avoid maintenance.

Post-and-Rail Fences. Easy to build, and fairly easy to maintain, this is one of the most popular fence styles, especially for horse owners.

Privacy Fences. Cedar is an especially wonderful wood for privacy fences, as it blocks out nearly as much noise as concrete.

Lattice. Whenever you want to maintain a degree of visibility, consider building a wood lattice fence. Despite being fairly inexpensive, lattice is beautiful, so it's great for masking unattractive features on your property, such as utility tanks. Lattice is most often used as a decorative touch on the top of another fence style, such as a privacy fence.

To Refinish or Not to Refinish

You are not required to refinish your fence. It's up to you to decide whether you want a rustic, weathered, silvery fence, or an up-to-date, warm, refinished fence.

Many experts, however, caution against leaving a wood fence unfinished, as it will deteriorate more quickly. If you prefer the weathered look, it's best to use a semi-transparent, gray-toned stain to protect the wood.

As the world goes "green," many people are turning to natural oils for refinishing fences. Linseed oil is a wonderful choice for this purpose. It is totally natural, which makes it environmentally friendly. Additionally, linseed oil takes to wood more easily than other stains. Most semi-transparent stains use linseed oil as a base. Overall, cedar is a great wood to refinish, mainly because it takes in sealants better than other woods.



Cedar fence with pergola-style arbor



Lattice top cedar fence

Repair Issues

Wood fences are prone to three types of disrepair:

Rotting posts

Moisture from the soil can cause posts to rot and fall away, which can lead the rest of the fence to sag and become unstable.

The fix: Use pressure-treated posts set in concrete.

Sagging fence

In addition to unmoored fence posts, fences can sag if the posts aren't deep enough in the soil.

The fix: This is a difficult problem to correct later in the life of a fence, so make sure your fence posts are deep enough—the standard depth in most areas is 2 feet.

Loose rails and boards

The rail is the part of the fence that runs horizontally, parallel to the earth. The boards are the “face” of the fence—they are placed vertically between the posts.

The fix: Loose boards may be put back into place with galvanized screws or nails. Rails that have come loose may be fixed in a similar way using galvanized fence clips.

Checklist: Tips for Building Strong Wood Fences

◆ **Use galvanized fasteners.** Hot-dipped galvanized nails work well, whereas screws add a lot of cost and are rarely used. If you are having the fence built for you, be sure to inquire after the type of fasteners your contractor will use.

◆ **Use pressure-treated posts set in concrete.** As water destroys wood over the long term, any wood that comes in contact with the ground requires extra protection.

◆ **Protect against insects, fungi and ultraviolet rays.** Finish your fence right away, and repeat every three or four years once it's erected. If you anticipate a lot of bugs and mold, it's a good idea to apply a finish that contains a mildewcide or insecticide. Likewise, if you live in an especially toasty area and you expect the fence to get plenty of sun, you should apply a finish that includes ultraviolet protection. Semi-transparent stains provide good protection against the sun's rays.



Decorator cedar fence

Vinyl Fencing

When it comes to fencing materials, vinyl is the newest kid on the block—and a popular new kid it is. Because vinyl fences are made of PVC plastic, they're not affected by the weather, they're hard to scratch, and they do not fade in sunlight. If they are tightly built, warping and other structural issues are nonexistent, as are insect infestations. So if you're looking for a low-maintenance fence, vinyl is the way to go.

Vinyl is also easy to clean. A simple wipe-down with a soapy sponge or a well-aimed shot from a hose usually does the trick.

Another advantage of vinyl fencing is that it is lightweight and easy to handle. Many manufacturers now offer vinyl kits that may be assembled with little more than a level and a drill. Alternatively, if you plan to hire a contractor, your installation costs will be quite low with a vinyl fence.

One of the disadvantages of vinyl fencing is the higher initial material cost. However, this is one of those cases in which a larger up-front investment translates into savings over the long term. Reputable manufacturers offer lifetime warranties on all parts, so once your fence is up, you'll be set.



Vinyl lattice top fence

Advances in Vinyl Fencing

In the 1980s, vinyl fences had a nasty reputation for fading with sunlight and becoming brittle in cold climates. That's because the initial vinyl fences didn't account for the destructive power of ultraviolet rays. Before the development of vinyl fences, PVC was almost always used inside a building or underground; early developers overlooked the fact that vinyl fences would be at the mercy of the elements, including sunlight.



Vinyl privacy fence

Today, however, these issues have almost completely disappeared. Stronger PVC and improved manufacturing processes have strengthened vinyl fencing dramatically, as the existence of the now-standard lifetime warranty shows. The first change in construction has to do with layering—now, through a process called coextrusion, two layers of vinyl are bonded together. The top layer contains protective chemicals, including titanium dioxide, which decelerate the rate of decay. To reduce cracking, the thicker bottom layer contains special chemicals to help keep the vinyl flexible.

Vinyl Fence Designs

Another shift in vinyl fencing is that there are far more styles available today than could be obtained just a few years ago. Basically, whatever your preference, there's probably a vinyl fence to match. DIY-types may order vinyl fence kits directly from the manufacturers. Contractors will be able to provide you with a wide array of vinyl fence styles, if you're not looking to assemble one yourself.

Even though nearly any style is available in vinyl, some look better than others.

Picket Fence. The next time you walk in your neighborhood, look closely at the picket fences you see. Chances are a few that you thought were wood are actually vinyl. You'll save yourself plenty of work by opting for a vinyl picket fence, rather than painted wood.

Solid-Panel Fence. This style is the traditional "privacy fence," with flat sections between each post. A solid-panel vinyl fence is wonderful for a pool area.

Three-Rail or Post and Rail Fence. Imagine a green pasture with horses frolicking inside an airy-looking yet sturdy fence, and you'll probably picture a three-rail or post and rail fence. This style is perfect for large tracts of land, when you want to split up space without sacrificing visibility.

Lattice Top Fence. Vinyl is available in lattice styles, and you'll certainly appreciate the paint-free existence of a vinyl lattice fence.

Other Synthetic Fencing Options

As the vinyl manufacturing process has improved, a plethora of new synthetic fencing materials have appeared. A favorite is [SimTek simulated rock fencing](#). For millennia, humans have loved the look of stone fences but hated the backbreaking process of building one.

SimTek and other synthetic stone fences look almost identical to a real stone fence, especially with the addition of complementary landscaping. Like vinyl fencing, these synthetic stone walls are lightweight, strong and virtually maintenance-free. Synthetic stone products are also available in a variety of colors.

Synthetic lumber products are also available. Resinwood, for instance, is lumber created from recycled plastic, ensuring that it will not deteriorate over time. As with high-quality vinyl fencing, UV stabilizers are included to make sure its vibrant colors stay as bright as they were on the day you installed the fence. Unlike SimTek, Resinwood is not pre-assembled, so you will need to erect the fence yourself.

As contractors shift their focus to environmentally friendly building materials, many are calling for an end to the use of PVC. That's because PVC is hard on the earth during manufacturing, and it's difficult to recycle. Consensus has not been reached on the overall impact of PVC on human health; you can learn more about these issues at [Wikipedia](#) and other online references. If you are interested in building a low-maintenance fence but wish to avoid PVC, look for [HDPE and composite fencing](#).

Chemicals in Synthetic Fences

Stabilizers. Stabilizers improve PVC's heat stability, which strengthens the material both during the manufacturing process and in the long term. In the past, lead and tin have been used to stabilize PVC, but many manufacturers are shifting to non-toxic stabilizers such as calcium and zinc. You can avoid health risks by selecting a conscientious manufacturer. Take the time to ask your contractor which stabilizer is used in the vinyl fencing you're considering.

Titanium dioxide. Look for higher levels of titanium dioxide in the top layer of vinyl. A long-lasting vinyl fence will have 10-12 parts per 100 of titanium dioxide in the top layer. This protects it against UV damage and helps maintain the color.

Precipitated calcium carbonates. These improve PVC's impact strength. Without this or similar compounds, a swift golf ball or baseball may pierce vinyl fencing. PCCs are thought to be safe for the environment and humans, which makes sense since most seashells are composed of calcium carbonate.



Vinyl picket fence

Repairs for Vinyl Fences

Since modern PVC is quite strong, the likelihood that your vinyl fence will need to be repaired is pretty low; however, a quick search of online forums shows that some homeowners do run into issues. A common experience is that of damaging a vinyl fence with a lawnmower or other tool, so be careful while working around your vinyl fence.

Additionally, baseballs and other projectiles may damage low-quality PVC. To avoid this issue, select a high-grade PVC manufacturer. (For more information, see the tips for [finding strong PVC](#) in the checklist at the end of this chapter.)

If you do find holes in your vinyl fence, your first response should be to check your warranty. The manufacturer may replace parts, which are often covered by a lifetime warranty. If your warranty does not cover such damage, you can repair the fence yourself by replacing the broken parts.



Vinyl lattice top fence

Warranties for Vinyl Fences

Aside from keeping an eye out for superior quality characteristics (see the checklist below), you can guarantee the long life of your vinyl fence by carefully reviewing manufacturers' and installers' warranties. Twenty-year to lifetime warranties are common in the field, so accept nothing less. You should also check the guarantee on work by the contractors installing your fence.



Vinyl semi-privacy fence



Vinyl fence with arbor

Even a lifetime warranty will not cover every possibility. However, a strong warranty should cover breaking, fading, yellowing and cracking. What will probably not be covered? Damage from external forces, such as being struck with a baseball.

For a fairly comprehensive comparison of warranties according to manufacturer, read [Vinyl Fencing Manufacturers & Warranties](#).

Checklist: How to Make Your Vinyl Fence Last

- ◇ Choose a kit with *higher levels of titanium dioxide* in the top layer. This prevents decay over the long-term.
- ◇ Make sure the fence is *tightly fastened together* and posts are *accurately placed*. If you are assembling your vinyl fence yourself, spend extra time measuring.
- ◇ *ASTM F964-94* refers to a voluntary quality standard for vinyl fencing manufacturers. Ask whether the manufacturer follows this standard.
- ◇ Ask whether the manufacturer uses co-extrusion (bonding two layers) or mono-extrusion (one-layer). Although mono-extrusion does not exclude high quality, co-extruders are likely to make longer-lasting fences.
- ◇ It's also a good idea to ask about the details of the vinyl fencing. Here are a few traits to look for:
 - Stainless steel gate hardware.
 - Aluminum or galvanized steel inserts for weak or extra-long panels.
 - Substantial, heavy rails and posts and notched rail-fastening systems.
 - Thick walls on parts and reinforced sections if you anticipate extra stress on the fence (such as horses leaning against it).
- ◇ Your vinyl fence should require little or no long-term maintenance, aside from occasional cleaning. An orange-based cleaner such as GOJO works well.

Metal Fencing

Aside from stone fences, metal fences are probably the style with the longest pedigree. Wrought-iron fences have been around for centuries. Most of today's "wrought-iron" fences, however, are actually made of aluminum, steel, composites or polymers. These materials are lighter, less expensive and much easier to work with than actual wrought iron.

Metal fences are quick to construct, require little maintenance and look good in a variety of applications. They make wonderful security fences, since chain-link and aluminum fences block would-be intruders without blocking off views. Finally, metal fences typically feature strong gates, latches and hinges, which are often the first parts of a fence to wear out.

One downside to metal fences is their initial cost, which is especially high for authentic wrought-iron fences. These are becoming so rare that many historic districts are putting laws into place to protect their aging specimens. Aluminum and chain-link fences are much more affordable, although chain-link fences can be eyesores without the proper landscaping or design elements.

If you want an environmentally friendly fence, metal has both pros and cons. On the plus side, metal fences usually last for at least one lifetime. On the downside, the materials are limited; extensive mining is required for steel and aluminum fences.

Because genuine wrought iron fences are rarely erected nowadays, this chapter will focus on aluminum, chain-link and steel fences.

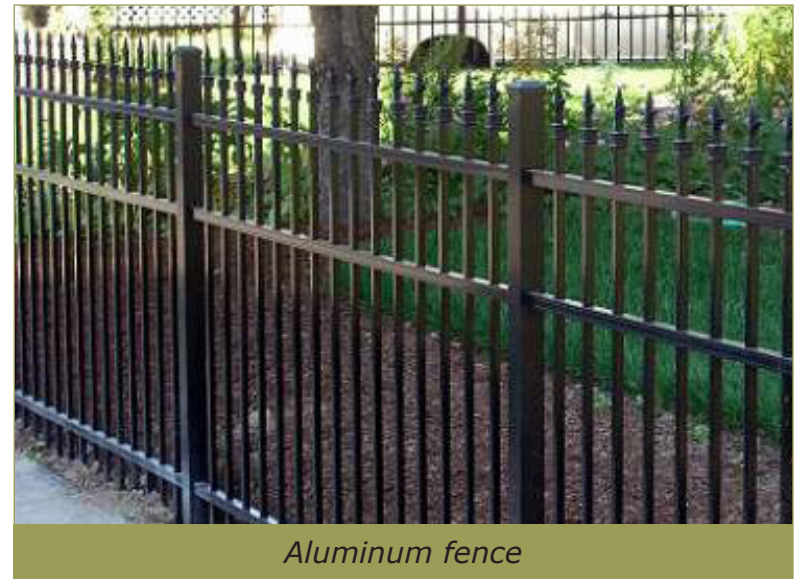
Aluminum

Aluminum is an amazing material. It is lightweight, it never rusts, and it is inexpensive. Today's aluminum fences are often hollow versions of traditional wrought-iron designs. Many feature pointy picket-style toppers. Aluminum fences with smooth rails along the top are especially suited to pool areas.

Aluminum fences can match a variety of homes. Cast-aluminum fences, for instance, nicely compliment Tudor Revivals, Neo-Colonials and ramblers from the 1950s.

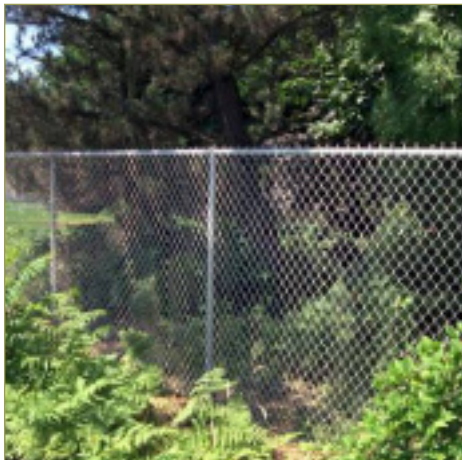
Ornate wrought-iron styles are wonderful for Victorian villas, Italian Renaissance residences, and Queen Anne abodes.

If you're considering installing an aluminum fence, carefully consider your color choice. Metal fences are available in a wide variety of tones. Think about matching a particularly attractive part of your property. For instance, a dusty red may perfectly highlight the red tiles on your Spanish Colonial home. Perhaps more than any other fence material, metal is malleable to your design needs, so let your imagination flow as you design your metal fence.



Chain Link

Chain-link fences are the soufflé of the fencing world—they have the potential to turn out well, but making one work takes finesse. If done tastefully, chain link fences can compliment nearly any edifice. On the other hand, chain link can also make for an ugly barrier. As chain-link fences are inexpensive and quick to install, many businesses use them for purely utilitarian reasons—to keep people out. So, if you're attracted to chain link, consider how you can dress it up.



Chain link fence

One way to soften a chain-link fence is to coat it with PVC, which is available in many different colors. Alternatively, you may choose to have plastic strips woven through the links of the fence. Privacy slats reduce wind flow, so they can act as a protective screen for your home.

Chain-link fabric is available in a wide variety of gauges and mesh sizes. The gauge describes the thickness of the wire woven together to create the fabric; the smaller the gauge, the thicker the wire and the stronger the fence. For residential fences, 11.5 gauge is standard.

Mesh size indicates the size of the “holes” between the wires. The smaller the diamond shape between the wire, the more steel in the fence and the stronger and more security-proof it is. For residential applications, 2-inch to 2 3/8-inch mesh is common. For higher security, choose smaller mesh.

Steel

Steel fences combine grace with strength. They offer clean lines and charming designs, yet they may also have fail-proof security features. Welded steel is stronger than aluminum, but it can rust, so be sure to opt for a galvanized coating if you choose to put up a steel fence.

Steel fences are sometimes called “tubular,” meaning the various fence parts are hollow. Still, such fences are quite strong because the vertical elements run through the railings at the top and the bottom of the fence. Due to their strength, steel fences are often used for commercial security purposes, but they also make great residential fences with a wrought-iron look.

Many steel fences are beloved for their beauty. Because the front and back of steel fences are identical, they may be enjoyed on both sides. Cappers and other design elements allow for great individuality in steel fences.

Checklist: Questions to Ask Your Professional

◆ **What kind of coating is on the fencing materials?**

Tubular fencing sometimes suffers from corrosion from the inside out. Moisture may be trapped inside the tubes, which can cause rust. To guard against this tendency, choose a solid steel fence, or purchase a fence a protective coating.

◆ **What kind of warranty do you offer?**

Warranties for steel fences range from twenty years to a lifetime. Read the fine print to make sure you're getting a fair deal. Check which parts are included in the guarantee, how labor costs will be covered and whether you have to pay transportation costs for replacement materials.

◆ **What kind of fasteners do you use?**

As with all fences, the long-term strength of your metal fence will depend largely on the quality of the fasteners.

◆ **What are the security features of this fence?**

In general, metal fences will offer high security if there is little space between the infill (the vertical elements). There shouldn't be enough space at the bottom for someone to squeeze underneath the fence. Finally, pointy or other specially designed toppers will increase the security of a metal fence.

◆ **Will this fence require maintenance?**

Ask your fencing professional or manufacturer to explain the features that will help your new fence last.

General Deck Building

Decks are no longer just a flat spot in the garden. These days, you can include a chimenea, fire ring or outdoor heater to turn your deck into a cozy spot even on chilly nights. Adding a hot tub to your deck can transform your home into a spa. Throw in a nice grill, and you have an automatic entertainment destination. Connecting a deck to your home will effectively expand your livable space; who couldn't use more of that?

Homeowners with sloped yards find decks especially appealing. Instead of shoving around tons of dirt to create a level surface, a deck can change a steep hillside into the perfect perch for watching the sunset. (It's important to ensure that such structures have extra strong foundational supports, to protect against landslides.) Greenhouses and sheds may also be connected to one side of a deck for all-weather access. Finally, decking around a pool is much more charming than concrete. Discover your perfect deck design by reviewing the following design tips.



Designing the Right Deck for Your Home

Select a Theme

What do you want your new deck to “say”? Perhaps you’d like an energizing space with plenty of cheerful plants. The Mediterranean style may be your best bet. Alternatively, if you’re looking for a place to meditate over your breakfast cup of green tea, Japanese elements will put your mind at ease. Of course, if no specific theme appeals to you, a traditional cedar American deck is always a beautiful choice.



Composite deck

Consider Color

From calming blues and greens to stimulating reds and oranges, color definitely impacts our mood. As you imagine your deck, think about which colors would best compliment your landscaping and home design. Don’t limit yourself to just one color; especially in multi-section or step-down deck designs, contrasting or complimentary colors may be best. Stains in nearly every color of the rainbow are available for wood decking, and composite decking comes in many colors as well. (If you use colored composite decking, you can’t change the tone down the road, so be sure you’re 100% satisfied with your choice.)

Place Furniture and Accessories

As you figure out where you want your deck to go, use items in your yard to help you imagine the best placement. For instance, use a couple of two-by-fours to outline the basic shape of a deck. Move your patio furniture around the yard to figure out the most convenient and attractive spot for your deck. Notice which views will be available from the deck location and how the deck will look from the rest of your property.

Understand Your Needs

Decks are often placed off of kitchens, dining rooms and living rooms. In these locations, they provide a transition from indoor to outdoor environments. As you plan your deck, think about what you'd like it to be used for. Will it serve as a location for eating? Socializing? Relaxing? The placement of your deck will largely determine how it is used. Think about how visitors might move around your deck and how you can place it to facilitate flow.

Ponder Pergolas, Trellises, Fountains and Bridges

While you're putting in a deck, why not add a few vertical gardening elements? Climbing plants, such as roses and clematis, love trellises. If you live in a temperate climate, a fountain can turn your deck into a humid tropical getaway, while a bridge over a pond or Japanese-style rock river can add intrigue to your yard. In essence, a bridge is simply a small deck, so it shouldn't be too much of a hassle to add one while you're constructing your deck.

Handrails and balustrades

These are the fence-like aspects of your deck. Handrails can direct visitors up stairs or along a certain pathway. Most people install handrails and balustrades for safety, but they are also wonderful opportunities to add distinctive design elements to your deck. Before putting up any railings, check that they won't obstruct the views you wish to preserve.

Hidden Footings

If you are building an elevated deck, consider placing the joints farther back so you can place the footings farther back, as well. This will block footings from the line of sight, which is appealing from a design perspective.

Sun and Shade

Observe your potential deck locations during the day to see what kind of sunlight they get. The north side of a house is generally shady and cool, while south-facing areas will get direct sun.

Think about Transitions

More than any other structure in your home, a deck acts as a transition from private to public spaces. To maximize your enjoyment of your new deck, focus on the transitional aspects of your deck. For instance, French doors are pleasant to open and close; they beckon viewers outside. Sliding doors are easy to open and close, so they're also a great choice for decks.

Construction

Once you've made some basic decisions about your deck design, it's time to think about the more technical aspects of your deck.

Wood or Composite?

Most contractors consider cedar to be the best organic material for decking. On the other hand, today's composite materials are durable and require less maintenance than genuine wood decking. (Because composite decking has low tensile strength, you should use pressure-treated wood for the footings.)

The Importance of Fasteners

Most experts recommend using screws to hold decks in place. They have a high draw strength, which is the amount of pull required to tug the fastener out of the decking material. Nails have much lower draw strength than screws, which are also easier to take out than nails; however, screws are more costly and time-consuming. To prevent stain wood stains, use galvanized and corrosion-resistant fasteners.

Alternatively, many contractors recommend using deck clips to secure the deck boards to the framework. Deck clips fasten from beneath the boards, which means unlike screws, they remain hidden. They also don't require you to drill into the deck boards, eliminating issues such as splitting or seepage of water into the wood. You can typically choose to have your deck built with deck clips for an extra fee.

Plan for Drainage, Slopes and Utilities

Before you begin to build, analyze the earth where the deck will go. If the ground under your deck is soggy, the structure will not be solid. Create a good drainage system. Measure the slope of the area where you'd like to build; this is a crucial aspect to take into account as you sketch out your design. Finally, you should check for utility lines to make sure your deck design doesn't cut off access and to ensure you don't cut through any electrical lines or pipes. You can do this by [dialing 811](#).

Supporting Weight

It's necessary to use real wood for the supports of your deck—synthetic materials just aren't strong enough to hold up so much weight. Pressure-treated wood is a good choice because it's stronger than the softwoods typically used in decking. Remember, your deck needs to hold its own weight ("dead weight") as well as the weight of whatever is placed on top of it ("live weight"). Most city codes require decks to be able to support 50 pounds per square foot of deck. Hot tubs are especially heavy; one way to support them is to sink them into concrete moorings. Your decking professional should be consulted for any structural concerns.

The best practice for deck footings is to use pressure-treated ground-contact posts set in concrete. Since moisture is the number one problem with decks, it's important to leave space for air to flow around all parts of your deck. Wood must breathe in order to properly dry between storms. Today, many composite materials are long lasting, but your deck will only last as long as your footings and framing.

Maintenance Concerns

Proper deck maintenance depends on the type of material you select. To remain safe and pleasant to walk on, a wood deck should be finished within 30 days or as soon as is practical following construction, and it must be cleaned and refinished every 2-3 years. If you're looking for a maintenance-free deck, you should choose a synthetic material. Here are a few maintenance issues to take into account:

- **Tints** do more than bring a splash of color to your deck; they also contain UV-absorbing chemicals to protect the wood from sun damage.
- **Use a stain pad or a stain pad/sprayer** to apply the stain to the deck. This helps "push" the stain deep into the wood. If you use a sprayer, wipe up extra puddles with the pad to make sure you have an even application.
- **Remove debris** from the cracks in your deck. Leaves and other detritus attract moisture, which can damage wood.
- **Do not use bleach** to clean a wood deck, as this will damage the wood.
- **Clean up mold ASAP.** Mold is especially damaging to cedar, so you should be sure you clean up any mold right away. Additionally, all decks need to be carefully washed every 2-3 years. Your deck will be exposed to moisture from the elements, and moisture attracts fungi and mold, which must be removed to protect the structural integrity of the deck.

Checklist: Important Questions to Answer

◆ **What is your budget?** Your answer to this question will determine which materials are in your price range. Exotic hardwoods (also known as “ironwoods”) tend to be the most expensive, while cedar falls in the middle of the range. Composite materials typically require less maintenance down the road, so their initial price, which can run higher than cedar, does not indicate the long-term savings you’ll accrue.

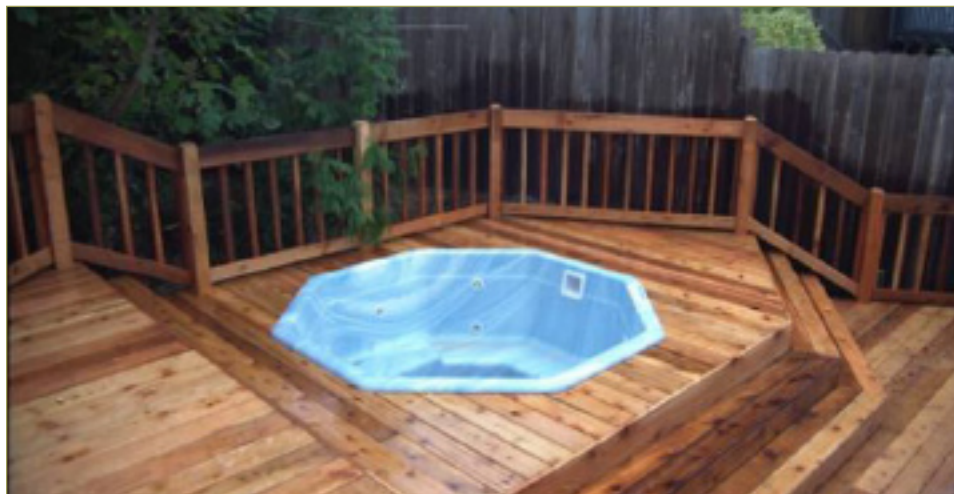
◆ **Do you mind doing maintenance?** Wood often looks better than composite in the long run, since you can merely refinish it to remove scratches and create a smooth new surface. However, choosing to build with wood means you are dedicating yourself to refinishing your deck every 2-3 years.

◆ **What local climate patterns might affect your deck?** Moist locales see more mold and mildew, so wood decks in those areas must be refinished more often. Likewise, harsh sun and extreme cold causes wood to expand and contract, which can lead to splintering, cracking and warping. Unless you’re willing to refinish your deck when such issues pop up, those who live in extreme climates may be better served by a composite decking material.



General Deck Building

- ◇ **What are your design and use goals?** Which textures, colors and materials will best compliment your home and yard? Figure out how you'd like to use your deck and what message you want it to send.
- ◇ **How long will this deck last?** A well-built deck should last at least 15-20 years. At that point, you may need to revisit the deck's foundation and shore up any weak framing or posts. Decks made of pressure-treated wood may last 50 years or more. High-quality cedar, with few knots and strong, tight grain, will also last 50 years or more. Exotic hardwoods, such as teak, are quite expensive, but they will probably last longer than 40 years. Synthetic decks usually come with their own warranties, which cover anywhere from 25-100 years. Of course, if you do not maintain your deck properly, it will not meet these longevity estimates.



Cedar deck with built-in hot tub

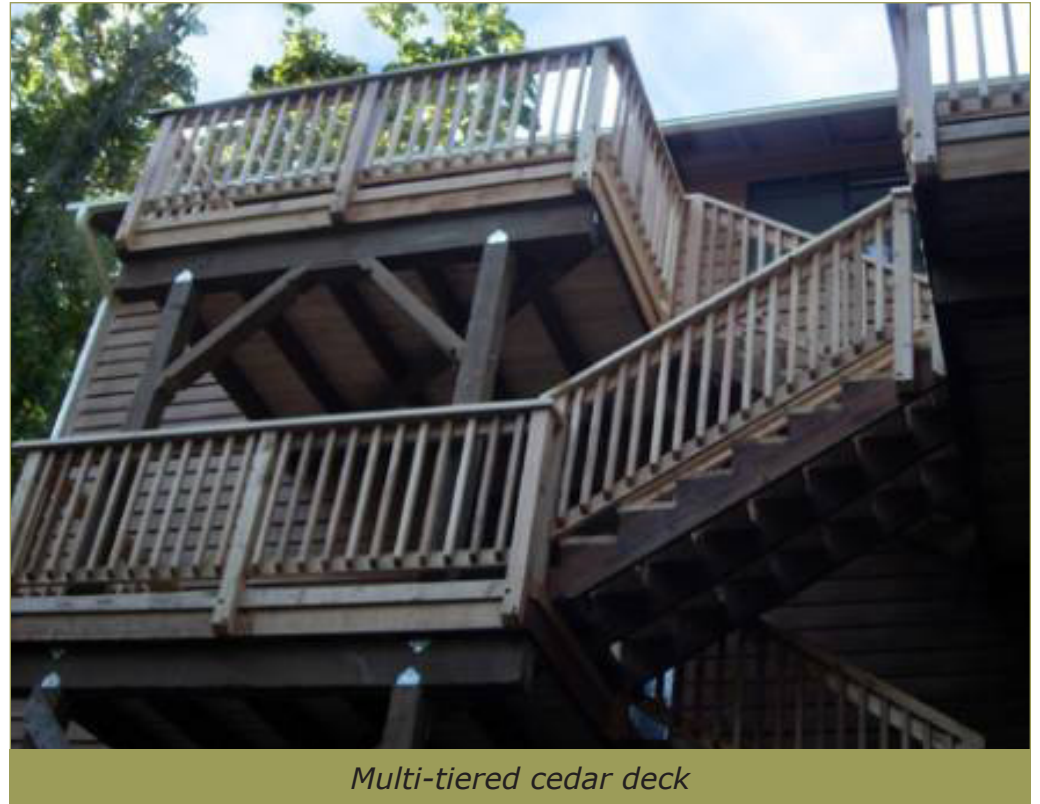
- ◇ **How much weight should this deck hold?** If you're hiring a contractor, he or she will take care of the structural concerns for you. A deck made primarily for walking and standing on doesn't need extraordinary supports. However, a deck with an inset hot tub is a completely different story—when it's full of water and people, a hot tub can weigh as much as a minivan.

Wood Decking

Wood was the original decking material, and it's easy to see why. Wood is easy to work with, fairly lightweight, pleasant to the touch and beautiful. Assuming you use the right species, wood is also strong enough to support a deck.

Another benefit of wood is that it is easy to spruce up. A worn-down wood deck can be refinished to create an entirely new look. A final advantage of wood as a decking material is that it is fairly low-cost.

However, there are also disadvantages to using wood for decking projects. As explained more thoroughly in the [Wood Fencing](#) chapter, wood is affected by moisture, sunlight and changes in temperature. Over the long term, wood decks can fade, splinter, warp and crack without proper maintenance. Wood decks must be refinished every few years. Finally, some woods are not insect-resistant.



Multi-tiered cedar deck

Cedar vs. Other Woods

Many people prefer to use cedar in their decking projects. That's because cedar is gorgeous, strong, insect-repellant and durable. Native American tribes called Western Red cedar "the tree of life" because they used it for everything from ceremonial masks to canoes. Cedar also blends well with natural environments, which explains its popularity for seaside resorts. Finally, those who are concerned with protecting the environment prefer cedar as a decking material because cedar is a renewable resource.

Tropical hardwoods and Port Orford cedar are good choices if you're looking for an especially long-lasting deck. Port Orford cedar is one of the toughest materials on earth and is preferred by builders in the Northwest, where wet conditions wreak havoc on other decking materials. In fact, according to strength and hardness tests, Port Orford cedar is the [strongest cedar in the world](#). Some may also like the fact that Port Orford cedar is also used in artistic applications, such as musical instruments. Port Orford cedar is less likely to warp, twist and splinter than other woods. Finally, it withstands impacts and takes stain better than other cedars.

Tropical hardwoods, such as Ipe, are also longevity superstars, but cost and transportation issues make them more difficult to attain. Because they must be transported so far, tropical hardwoods cost more than cedars and pressure-treated pine. They also require much more labor to install, which means installation costs are also higher.

Maintenance and Repair

Owning a wood deck involves plenty of elbow grease. Periodic repairs may pop up in addition to the regular refinishing you'll need to do to keep your wood fence in pristine condition.

Refinishing: Cleaning the surface

When refinishing your deck, first you must clear off the surface and remove any mold, mildew and dirt build-up. A wood substrate will help; purchase such a cleaning product from your local hardware or paint store, spray it on the surface of the deck, and let it sit for twenty minutes or so. You can then use a garden hose to spray the cleaning solution (and the grime) off the deck. Let your deck dry out for a few days before moving onto the next step: sanding.



Cedar deck

Refinishing: Sanding

Use a brush to remove any tough stains. Then carefully sand the surface of the deck. Brush off the sawdust off the deck before applying stain.

Refinishing: Staining

Choose a stain that is appropriate for your location's weather patterns.

UV protection. As explained in the [overview chapter](#) for decks, wood is susceptible to damage from ultraviolet rays. UV rays dry out and weaken the wood. To avoid unnecessary splinters, cracking and warping, choose a finish that contains UV protection.

Mildewcide. If you live in an especially wet area, look for a stain that contains mildewcide; this will reduce the amount of work you have to do to clean your deck.

Water repellants. Some stains also contain water repellants, which may help prevent warping, twisting and cracking.

Repairs

Even the strongest deck will need repairs eventually.

Broken boards. Cut away the broken section with a jigsaw. Do not cut any of the supporting beams nearby. Replace the wood—a handy trick is to take the old piece of wood to the lumber yard so you can match it as closely as possible. Affix the new board using galvanized screws or nails to match the existing deck.

Peeling or cracking sealant/finish. If your finish begins to look shabby from moisture and sunlight, sand around the affected areas and apply a new coat of finish. Avoid varnishes, which are especially susceptible to the elements.

Checklist: How to Build a Strong Wood Deck

- ◆ **Choose strong, galvanized** fasteners. Screws are better than nails over the long run but cost more.
- ◆ **Make sure the foundation** of the deck is strong.
- ◆ **Leave space for drainage** around wood and between boards whenever possible; this will help it dry out.
- ◆ **Do not place blocks of concrete** straight onto the ground to support your deck. These are not grounded enough, so a deck constructed in this way might wash away in an extreme storm.
- ◆ **Use brackets to support the beams** of the deck. Do not simply drive nails or screws into the side of the railings. This puts too much pressure on the fasteners. A bracket will help the deck “float” in place.
- ◆ **Use pressure-treated wood** for the foundation of your deck. This material stands up to the elements best.



Cedar deck with glass rails

Composite Decking

More and more consumers are turning to composite decking. According to The Freedonia Group, wood-plastic composite decks made up only 7% of the deck marketplace in 2002. That number had risen to 22% in 2006 and is forecasted to reach as high as 30% in 2011.

This relatively new form of decking, which is composed of wood fiber mixed with plastic, is practically maintenance-free, available in a wide variety of colors and pleasant to the touch. Composite decking will never splinter, scratch, bend, twist or warp. It is safe for children and animals. Many brands of composite decking are considered environmentally friendly, since they reuse recycled materials that would otherwise go into a landfill. (For more environmental ratings for composite and plastic lumbers, read the Healthy Building Network's [Guide to Plastic Lumber](#).) Finally, composite decking is strong enough to hold up in harsh weather conditions.

One disadvantage of composite decks is that they are prone to sagging without the proper structural support. Another is that if a scratch appears, or if you decide you don't like the color, you can't refinish or paint a composite deck. It's going to look the same for its entire lifetime—unlike wood, which may be almost endlessly cleaned, sanded and refinished. A final disadvantage of composite decking is its higher initial cost. Over the lifetime of the deck, however, this higher up-front cost is offset by nearly nonexistent maintenance costs. (You may have to purchase cleaning materials to keep mold off the surface of your composite deck—that's basically the only cost in the long term, unless you end up replacing the wood supports.)

A History of Composite Decking

Manufacturers brought composite decking onto the market in the late 1990s. At first, a major problem with the new material was that it was prone to “mushrooming”—i.e., the plastic-wood fiber material would puff up around the heads of the fasteners. To compensate, developers created smooth caps for the heads of fasteners. Still, wet and cold weather often drove even these fasteners out of early composite material. Additionally, many early composite deck owners struggled with mold infestations.



Composite deck

These problems have largely been fixed in today’s composite decking. The use of different recycled plastics resolved the expansion issues. Moreover, mold-fighting chemicals are now embedded in high-quality composite decking materials. Because they contain organic material (namely wood), composites without such protection are still susceptible to mold. (If you have an array of composites to look at, choose the one with the least obvious wood particles; this means mold has fewer places to latch onto the lumber.) Top-notch composite decking material cannot be scratched, although it does cost a bit more than other varieties. Finally, the mushrooming effect can now be avoided by using clips, rather than screws, to secure the various parts of the deck.

How Composite Decking Is Made

Composite lumber has two main ingredients: recovered sawdust (usually from pine, maple or oak trees), and virgin or recycled plastic. This combination of wood fiber and plastic makes composite decking very strong. In fact, composite lumber has a higher resistance to crushing than wood loaded perpendicular to the grain.

To create composite decking, the wood and plastic (usually polyethylene, PVC or polypropylene) are heated and mixed into a sort of dough, then formed into the desired shape. Lower levels of wood in the mix means the resulting lumber will be less susceptible to rot. Additionally, the more wood fibers in the mix, the less susceptible the composite lumber will be to fading and stains. Lumber with less than 50% wood is a good bet. Colorants, stabilizers, reinforcing agents, UV protection, mold preventers and moisture resistance may be added to strengthen the composite decking. The composite decking is then tested for strength and consistency.

One benefit of this manufacturing process is that composite decking may be molded into nearly any shape, including strong arches. Curved decks are quite pleasing to the eye, but they were much more difficult to build before the advent of composite decking. Composite decking may also be used for built-in deck seating.

For a much more complete picture of the manufacturing process for composite decking, read [*Wood Plastic Composites: A Primer*](#), published by the University of Washington and the University of Tennessee.

What to Look for in a Composite Decking Brand

As mentioned above, an early problem with composite decking material was its tendency to attract mold, especially when placed in shady areas. Unlike vinyl, composite lumber contains organic material, which is susceptible to decay.

Going local is probably the smartest thing to do when it comes to composite decking. That's because local manufacturers take regional weather into account when designing new products. For example, homeowners based in the Northwest should look for products that are mold resistant and stand up to the astonishing temperature shifts this region is notorious for. WestStar is a favored brand in the Northwest. Made entirely of recycled materials, WestStar includes a mold inhibitor so it won't rot as quickly as other brands. WestStar lumber also has a non-skid finish, which alleviates the slickness found in other composites. Finally, WestStar lasts because it's made of HDPE plastics. If something should go wrong, WestStar offers a strong warranty against checking, insect or termite damage and splintering.

Whichever brand you choose, see if deck clips may be used to fasten the deck. In traditional deck construction, screws are driven down into the joists. This technique results in strong decks, but moisture can seep into the area around the screws, which can lead to mold, mildew, and structural weakness. Deck clips turn this whole problem on its head by screwing in not from the top, but from the bottom.

For a more thorough look at composite decking, read [*Wood-Plastic Composites*](#).

Checklist: Questions to Ask Your Professional

- ◆ **What wood is used to make the decking?** Researchers have found that, just as some lumber is less susceptible to mold and insect infestations, composites made with sawdust from certain trees are more resistant to decay. For instance, as Washington State University and the University of Tennessee's [*Wood Plastic Composites: A Primer*](#) explains, composite decking made with eastern red cedar and cherry are "more resistant to water absorption, swelling, and rot."
- ◆ **What kind of plastic is used?** PVC is the strongest of the three types of plastic used in composite decking. Virgin PVC is typically stronger than recycled plastic. Boards containing polyethylene can span only 16 inches between supports, while those made with polypropylene or PVC can span 24 inches. On the flip side, polypropylene and PVC are more susceptible to weathering and surface oxidation.
- ◆ **Which quality standards does this composite meet?** There are voluntary quality standards composite decking manufacturers can choose to meet. Ask your contractor to explain which, if any, are met and what that means to you.
- ◆ **What kind of warranty does this product carry?** Can you guarantee installation labor? Most manufacturers offer 10- to 20-year warranties on composite decking materials. A few offer lifetime warranties. Be sure you read all the fine print for the warranty—it's not a fun task, but it will save you money and hassle down the road. Also, if you are having an outside contractor erect the deck, make sure you ask if the labor is under warranty.

Conclusion

In her novel *Emma*, Jane Austen wrote, "Ah! There is nothing like staying at home for real comfort." But unless the design is to your liking, your home can feel like one big to-do list.

As you commence your journey toward your perfect fence or deck, you may be dreading the amount of effort it will take to make your construction dreams a reality. Take heart in Austen's sentiment. Once your fence or deck is up, it will be worth all of the hard work and heartache. Nothing is quite so enjoyable as a comfortable, well-appointed home.

We appreciate your interest in this publication. For more information, please visit our online database of [fencing and decking resources](#).



Composite deck with decorative accent rails

Feedback and Other Resources

We always appreciate feedback on what we are doing. Please let us know your thoughts on what you just read, suggestions for improving our services, or any questions you may have about fencing and decking materials. We will use the feedback we receive to improve future editions of this book and grow our library of resources.

Contact a Rick's location:

http://www.ricksfencing.com/pages/company_locations.php

To further assist you in your quest to build a new fence or deck, we offer the following resources:

Online Price Quote—Get a fast and easy quote from Rick's Custom Fencing and Decking on your fencing or decking project.

Rick's Fence Materials Calculator—A free app for the iPhone that converts the dimensions of your yard into a comprehensive list of materials you will need to build your fence.

Fencing and Decking Resources Website—Our resource page offers tips, news and information on all topics pertaining to fencing and decking.

A User's Guide to Fencing and Decking Materials

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