



Always on the Level

How-to Wood Fence Building Guide

Building a wood fence isn't technically difficult, however, like any home improvement project, a little experience goes a long way. This DIY guide from the experts here at Midwest Fencing is packed full of tips and tricks we've learned over the years. If you're planning a weekend of fence-building and want to level up your fencing game, read on!

Contents

Before you begin

Materials List

Step 1: Planning your Fence Layout

Step 2: Marking the Post Locations

Step 3: Digging the Post Holes

Step 4: Installing the Posts

Step 5: Installing the Stringers

Step 6: Attaching the Pickets

Step 7: Installing the Gates

Step 8: Finishing the Fence

Before You Begin

There are two stages to building a fence: The hard stage and the fun stage. The first four steps are the hard stage: Marking a straight fence line, drilling your holes straight and to the right depth, and setting posts nice and plumb. We offer post-hole drilling and post-hole drilling and setting services for folks who want to skip the hard stuff and get right on into the fun stuff. If you're interested in a quote, check out midwestfencing.ca or call us 204-873-8461.

Materials List

All lumber should be pressure-treated brown

4" x 4" fence posts. For a 6' high fence, posts should be 10' long (see post depth below)

2 x 4 lumber for the stringers (or 2 x 6's if using 6 x 6 posts)

2 x 6 lumber for the top cap (or 2 x 8 if using 6 x 6 posts)

Use 16' lengths if your posts are 8 feet apart and 12' lengths for posts 6 feet apart.

1 x 6's for pickets

Pickets are available in 5', 6', and 8' lengths. If you need 4' tall boards, order 8' lengths and simply cut them in half)

Gravel (3/4 down, crushed limestone)

Measuring tape

Spray paint to mark post holes

String line

2' – 4' level

Shovels

Tamping bar



Always on the Level

3" galvanized nails or 3" deck screws to attach stringers to posts
2" galvanized nails or 2" deck screws to attach pickets to stringers.
Hammer or power drill
Circular or miter saw

Pro Tips

- The standard post size for fences around Winnipeg is 4" x 4" X 10' but if you are concerned about wind load, are matching a developer fence, or just want to upgrade to a beefier fence, consider a 6" X 6" x 10' posts.
- When calculating your lumber requirements, add approximately 5% more than you need to account for miscuts. You'll save time by avoiding extra trips back to the lumber yard.
- Although a top cap rail is not strictly necessary, we advise adding one. It will protect the finished ends of the pickets as well as your post tops. It will not only add rigidity to the fence line but will add years of life to your fence.

Step 1: Planning your Fence Layout

It's important to plan your fence layout before beginning the installation process. This involves measuring the perimeter of the area you want to fence, deciding on the height of your fence, and determining the number of posts, stringers, and pickets you'll need. Make sure to check local zoning laws and obtain any necessary permits, as well as locate and mark all your underground utilities located.

When measuring the perimeter of your fence, make sure to account for any slopes or changes in terrain that may affect the placement and therefore number of your fence posts. For example, obstructions like thick tree roots or underground boulders may prevent you from placing your posts on your pre-planned centers, forcing you to add extra posts on either side of the obstruction. Consider using graph paper to draw a to-scale diagram of your fence layout before calculating and purchasing materials.

Winnipeg bylaws require any fence in front of your home to be a maximum of 4' tall and any fence located from the face of your home, towards the back yard can be a maximum of 6'6" tall. Be aware of bylaws that dictate fencing heights and requirements for yards with swimming pools.

Be sure to verify the location(s) of your underground utilities. To locate and mark public utilities including Manitoba Hydro, City sewer lines, and Bell MTS visit Click-Before-You-Dig. To locate Shaw cable, visit DigShaw. You should also locate and mark any private utility lines like sprinkler systems and /or any underground power lines to remote electrical hookups. If you elect to hire a post-hole digging service for this part of the job, be sure locating and marking public utilities is included in their fees.



Always on the Level

Step 2: Marking the Post Locations

Mark the post locations using spray paint and a string line along the perimeter of the fence. Be sure to space them evenly apart choosing 6' or 8' centers, marking an "x" where the post holes will be dug. Do not exceed 8 feet between posts. Clear all foliage and debris along the fence line to ensure a straight and accurate string line and be sure to pull your string tight prior to marking holes. Double-check the marks and measurements before digging each hole.

Pro tip

- When measuring be careful about where you hold your tape measure. The starting point of your measure should be where the outside of the fence post will be. If you take your first measure where the middle of the fence post is, you'll find that your first set of stringers will be too short.

Step 3: Digging the Post Holes

Dig the post holes by hand using a post-hole digger or power auger, digging a hole for each fence post that is between 4'4" and 4'8" feet deep. Renting a power auger is your best bet if your soil is especially rocky or hard or if you have more than a few holes to dig. In Manitoba, most soil conditions demand a 4' deep post hole to minimize frost jacking so if you want a 6' high fence you'll need 10-foot-long posts. If your fence is 5 feet high or shorter, we still recommend your posthole be at least 4 feet deep.

Pro Tips

- Before installing the posts, be sure to clean any loose mud from the bottom of the hole. Don't overlook this step. Failing to clean out the mud will cause your post to sink as the mud in the bottom compresses and settles.
- If you've rented a machine to dig your holes, ensuring your post holes are straight and plumb is a two-person job. As one person operates the machine, the other checks the auger bit for plumb. Remember, if you are off by 1 or 2 degrees early, you'll be out by 6 to 8 inches when you're 4 feet deep and you won't be able to set a plumb post.
- When digging a hole in muddy conditions remove the auger bit every 8 inches or so and clean away the mud. This will reduce the amount of loose mud at the bottom of the hole and ensure the sides of your holes are cut nicely and clean.
- When renting or using machinery to dig your hole, be sure to follow the safety instructions, and wear steel-toed boots and safety glasses.
- As a final step before installing the posts, be sure to clean all the mud and debris from around the work site. Remember, a clean work site is a safe worksite!

Step 4: Installing the Posts

Placing a 4" - 8" layer of $\frac{3}{4}$ " down limestone at the bottom of each post hole allows for proper drainage. Set the corner and end posts first. Stand the fence post up in the hole, making sure it is level and plumb. Fill approx. $\frac{1}{4}$ of the hole with gravel and tamp/pack it down, while keeping the



Always on the Level

post plumb, repeat this until the hole is full and the post is packed solid. Once corners and ends are set, attach a string line from end to end and continue setting posts, repeating the steps above. Be sure to level the posts to the string line to ensure a straight fence line, as well as make sure the posts are at the correct height.

Pro Tips

- If you dig your hole too deep, don't worry. Just add more gravel and bring the bottom of your hole up to the desired level (usually 4 feet). Under no circumstances should you add mud to the bottom of your hole as it will compress and settle causing your post to sink.
- Check the posts for level and plumb frequently as you are filling the hole with gravel. Ensure the string line is pulled tight and not sagging.
- If setting all posts to the same height is not possible, simply cut them down to the correct height once all the posts are set.

Step 5: Installing the Horizontal Stringers

Start at one end of the fence and work your way to the other end, attaching each horizontal stringer to the fence post using screws or nails. Choosing nails or screws is very much a personal choice as there are pros and cons to both. Nails are less expensive and tend to help the job go quicker but over time, especially in windy areas, unlike screws, they tend to wiggle loose. Screws are more expensive but keep the fences structural integrity intact as the wood shrinks, warps and twists over time. Screws also make it much easier to replace individual pickets or sections of a fence.

For a 6' tall fence, install three horizontal rails (top, middle, and bottom). For a 4' or 5' tall fence only top and bottom rails are needed. The top stringer should be flush with the top of the post and the middle stringer is centered between the top and the bottom stringer once the bottom stringer is fastened in place. Typically, we leave 4 inches between the ground and the bottom of the bottom stringer and arrange the pickets so they go right to the ground. Use a circular or miter saw to cut the horizontal stringers to the desired length and shape.

Add a top cap, if desired. A top cap protects the tops of the pickets and posts from weather damage and adds years to the life of the fence. And, if the top cap rots, it's a simple matter to unscrew and replace it, as opposed to 5 or 6 rotting pickets, or worse, a rotting post.

Pro Tip

- We recommend staggering the seams (where two stringers meet at a post). Run a section of 16' stringers, then a section using 8' stringers, and continue alternating between 16' and 8' stringers to the end of the fence line. This improves the strength of the fence.



Always on the Level

Step 6: Attaching the Pickets

Start at one end of the fence and work your way to the other end, installing pickets one at a time. Place the first picket flush against the fence post and use a level to ensure that it is plumb then, attach the picket to the post using screws or nails. Be sure to check the pickets for level and plumb as you go, making any adjustments as needed.

If you're installing pickets on a slope, you may need to cut them to follow the contours of the ground. Make sure to cut each picket individually to ensure a neat and measured fit. When you reach the end of a section, rip the last picket to fit using a table or circular saw. Repeat this process for each section of the fence.

If you're installing horizontal pickets, your design won't include horizontal stringers. Rather, you'll be fastening 1 x 6 x 16' pickets horizontally directly to your posts. We recommend adding a vertical 2 x 4 sleeper board behind the pickets between each 8-foot span to help prevent the pickets from sagging or twisting. It is also a good idea to cover the picket seams at each post with 1 x 4's ripped from 1 x 6 picket stock.

Pro Tips

- If leaving a gap between each picket, be sure to use a spacer to ensure the gap is consistent. This will help your fence look neat and even.
- A carpenter's pencil is a good thickness to gap your pickets.
- Remember your gap will widen over time as your boards shrink so you might want to mind your gap by not gapping your pickets at all knowing that over time, a gap will appear naturally as the wood dries and shrinks.

Step 7: Installing the Gates

You can buy gate frames and hardware at the local big box store but building your own gate is easy. Cut two 2 x 4 cross pieces ½" shorter than your gate's gap width. Cut your pickets to the desired height of your gate and then screw them to your cross pieces locating them 8" from the top and 8" from the bottom of the pickets. Strengthen the gate by cutting a 2 x 4 to the proper length at a 45-degree angle and toe screw it to the cross pieces creating a "Z" frame style gate.

Attach the hinges to the horizontal 2x4 pieces of the gate, then to the post. Once the gate is hung you can add your latching hardware.

Pro Tips

- Set the gate posts 2' higher than the other posts. This will allow you to build a lintel by screwing a cross piece to the front and back at the top of each gate post. This header not only adds a decorative touch, but it will prevent the posts from twisting and sagging ensuring your gate will swing freely for years to come.



Always on the Level

- In order to set the posts higher, we typically install 12' long posts for the gates, maintaining the minimum 4' depth while installing the header roughly 8' above the ground allowing easy passage through the opening.

Step 8: Finishing the Fence

Don't be tempted to stain your beautifully built, straight, and level fence right away! We recommend allowing all pressure-treated fence boards to dry for at least one season prior to staining or painting. If you don't, your paint or stain will likely peel or fade prematurely. Use a weather-resistant finish to protect the wood from rot and decay.

Congratulations! You've successfully built a wood fence. Remember to properly maintain your fence by periodically checking it for any damage and repairing it as needed. And if you want to avoid the hard work and hassle of digging holes, setting posts, and hauling mud, give us a call. We're happy to do the hard stuff and leave you with the fun stuff!

Your Midwest Fencing Team

May 2023