



Chattanooga
Dock Builders

Dock Building 101

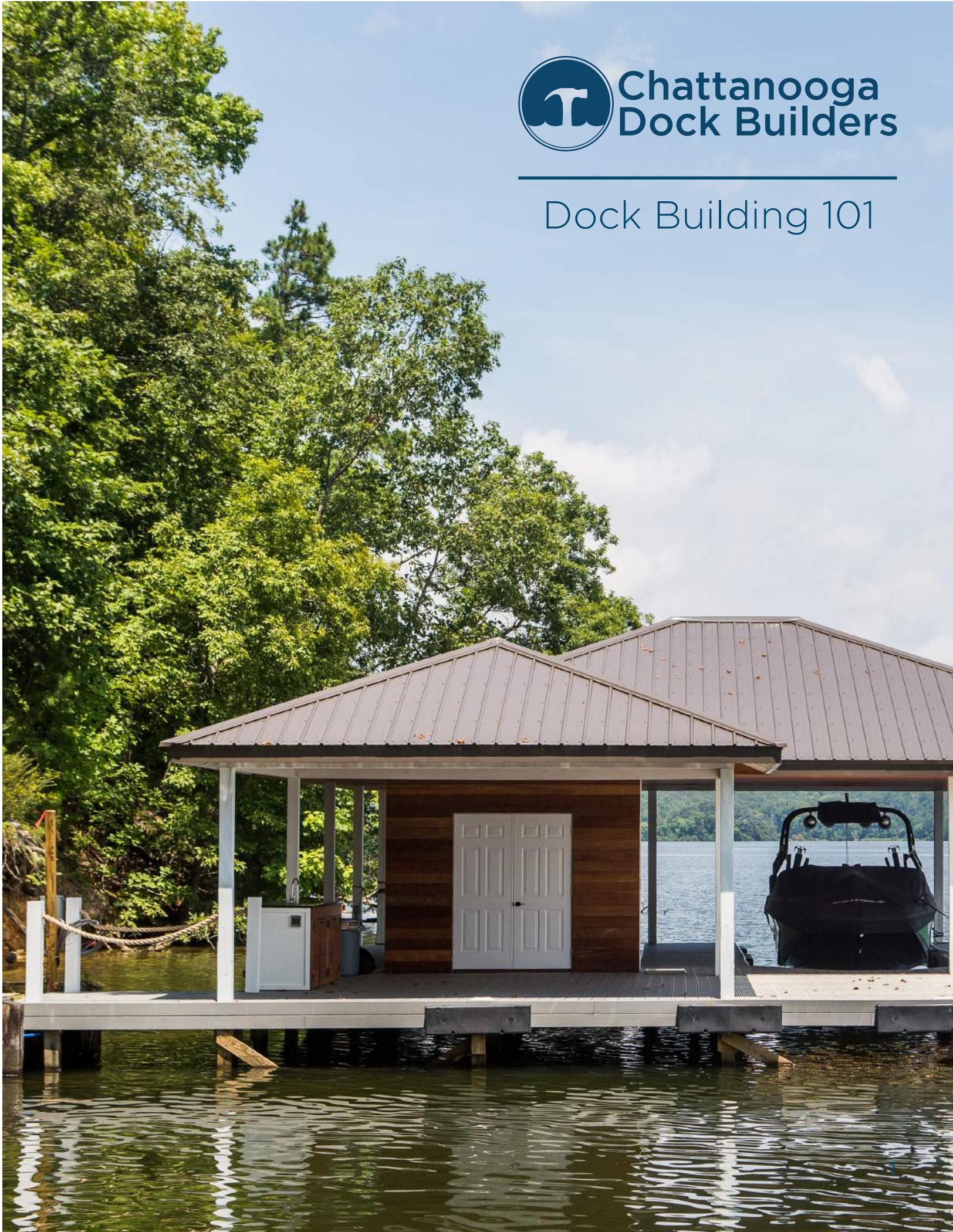


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SO I THINK I WANT A DOCK

Why should I own a dock?

REASON 1:

Get rid of the hassle

There's a reason you buy waterfront property: **to be near the water.**

So why is it that so many waterfront properties don't have some sort of dock that allows no-fuss boat, jet ski, or swimming access? Why live on the lake if you still have to drive to the marina where your boat is stored, or drive to the closest launch ramp?

You already spend all week dealing with traffic, long stuffy flights, the logistics of getting from place-to-place, so it doesn't make sense to add more stress to an activity that should be relaxing.

Building your own dock decreases the stress of loading the family into the boat. When you have your own dock, a day on the water is as easy as walking out of your house and starting the boat.

REASON 2:

It's cheaper than boat storage in the long-term

Dockage and storage fees are another good reason to build your own dock.

Why?

Boat storage in Chattanooga runs from \$1,600 to \$3,000 a year.

Say you're paying \$2,000 a year to store your boat. In five years, that's \$10,000 plus the hassle of driving back and forth when you want to use it.

That's \$10,000 you could've used to build your own dock. Money that would enable you to walk out your back door, get in your boat, and go.

As with most construction, there are a lot of things that need to be considered before starting your project. For example, there are some areas that are automatically disqualified from dock construction, so a good first step to building your dock is finding out if your area is in the clear for a project.

DISQUALIFIED AREAS MAY INCLUDE:

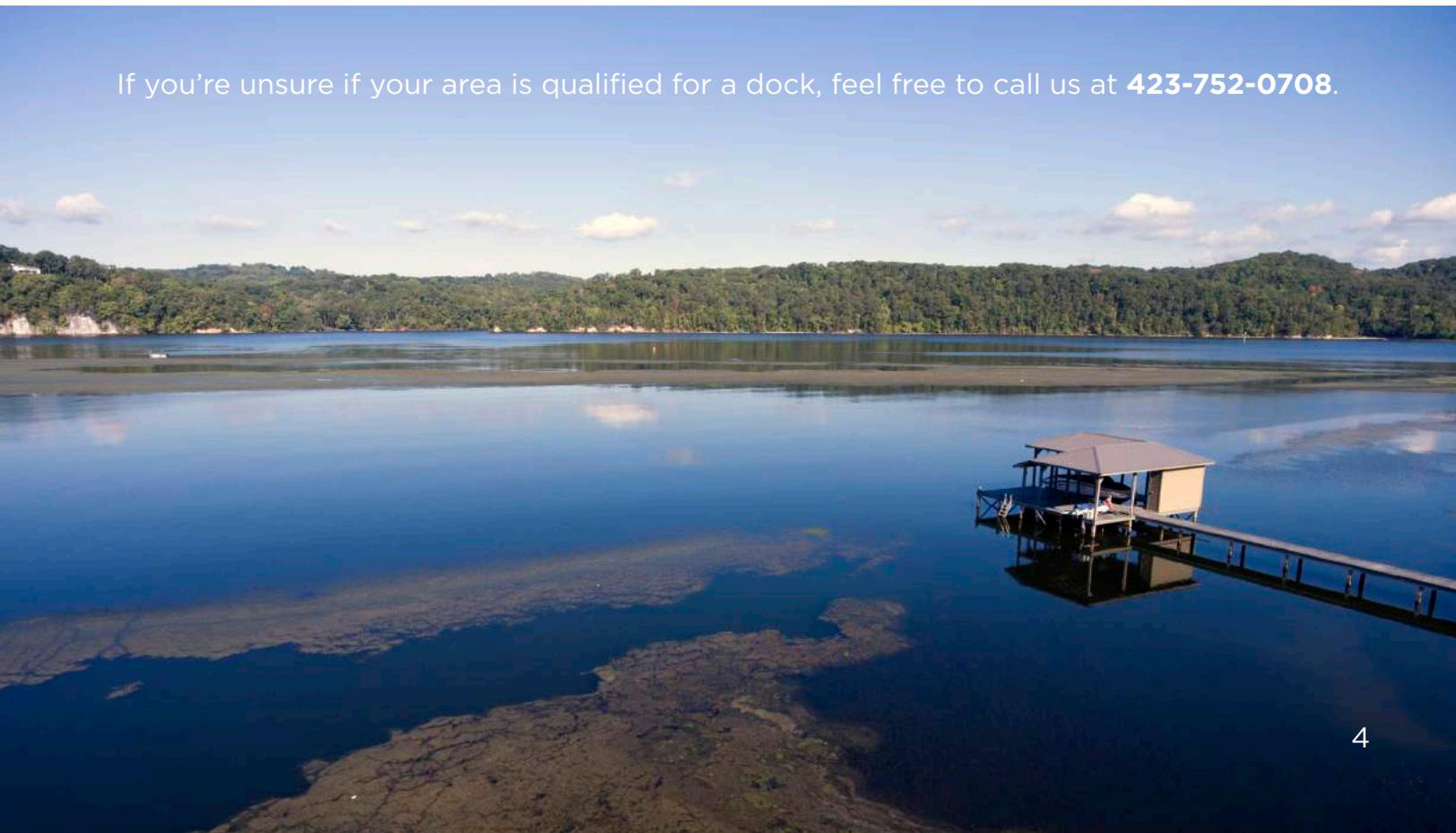
- 1.** Sites where the water is too shallow where the dock will be built.
- 2.** Planned private communities with dock construction restrictions.
- 3.** Insufficient property rights and/or water-frontage.
- 4.** TVA zones that prohibit water use facilities*

Also, it's important to note that if your shoreline experiences frequent heavy waves, such as the shore of a main channel or a large body of water, the price of dock construction will increase.

Heavy waves mean your contractor has to build a more robust dock that can withstand the constant change of energy and movement.

*A list of these zones can be found at: tva.gov/Environment/Environmental-Stewardship/Land-Management/Reservoir-Land-Management-Plans

If you're unsure if your area is qualified for a dock, feel free to call us at **423-752-0708**.



What should I expect for initial costs?

As with most construction, there are a lot of things to be considered when pricing a project. Things like dock type, material choice, site conditions and access, all work together to form an estimate.

GENERAL PRICING:

A basic pressure treated, pile driven, fixed dock without a roof or any accessories will be around \$30 per square feet.

An “all the bells and whistles” dock, built from high-end composites or exotic hardwoods, electricity, custom lighting, roof, boat lifts, water supply, and so on, can be over \$60 per square feet.

OTHER FACTORS THAT CAN INCREASE DOCK PRICE:

- Building in water deeper than ten feet.
- Limited land access---all materials and equipment must be brought in by boat/barge.
- Rocky lake bottom or anything underwater that might obstruct building.
- Shoreline/erosion repairs.

What should I expect for maintenance costs?

On average, maintaining your dock ranges from \$400 – \$2,000/year. How much maintenance your dock needs is dependent on the materials you choose before you start building.

MAINTENANCE FYI:

- Metal and composites will cost more up front, but require less annual maintenance.
- The biggest annual maintenance cost is preserving wood decking and railings exposed to direct sunlight.
- Floating docks damaged from wind and wave action, deteriorating wood decking, and docks hit by boaters are common repair items.

WHO SHOULD BUILD MY DOCK?

Are they licensed and insured?

Building a dock requires a specific set of technical skills: pile driving, working over water, etc. Because of the level of skills needed, any one you hire to build your dock is required to be a licensed contractor in your state.

Tennessee licensed contractors can be verified at this website*: www.verify.tn.gov



License Details	
License Status	ACTIVE - FULLY LICENSED
License #	58177
License ID	58177
Expiration Date	Sep 30 2016
Original Date	Sep 22 2006
Profession Code	1801
Profession Name	Contractor
First Name	
Middle Name	
Last Name	HOLLY HILL CONSTRUCTION, INC.
City	LOOKOUT MOUNTAIN
State	TN
Zip Code	37350
Rank	Contractor

*After you locate the contractor on the website, you can click “license details” to view the contractor’s license status. For example: the license information for Chattanooga Dock Builders (a division of Holly Hill Construction, Inc.) is shown to the right.

More info about insured dock builders.

Dock builders also have specialty insurance requirements. In addition to general liability coverage, contractors must carry USL&H insurance because workman’s compensation coverage will not cover employees working on dock projects on water with boat traffic. Unless your dock is built on a private pond or lake, the builder MUST be insured in accordance with federal polices or they’ll face severe penalties.

A federal act was passed in 1927 that states if a builder is found constructing a dock without USL&H insurance, he’ll be guilty of a misdemeanor and, upon conviction, will be given a maximum fine of \$10,000 or/and a jail sentence of up to a year.

USL&H insurance isn’t cheap, and some dock contractors chose to go without coverage, placing themselves and the dock owner at risk for litigation if an injury were to occur.

A handyman or homebuilder who thinks he can build your dock is a recipe for disaster.

When shopping for a dock contractor, keep these questions handy to ask any prospective builder to test their expertise:

- What are the differences between piles/poles and posts?
- What are the differences between vibratory vs. hammer pile driving and the advantage of each technique?
- What is the predominant soil classification at the location of the dock and what does that mean for pile depth, uplift resistance, and lateral loads?
- How do you determine if cross bracing is needed underneath the dock?
- Can you install ballasted float tanks, and when are these recommended?
- Will my floating dock have a shore attachment with cables and a winch requiring me to make adjustments? (In most cases, this is poor design and shifts the burden of maintenance onto the owner.)

QUICK REMINDER

Contractors licensed in Tennessee can be verified at www.verify.tn.gov/

WHAT TYPE OF DOCK DO I WANT?

Are there design guidelines I have to follow?

Good question! Yes, there are mandated design regulations.

The greater Chattanooga area's dock regulations are managed by TVA and the U.S. Army Corps of Engineers. So before you spend time designing a dream dock with eighteen water slides and five boat slips, make sure you check to see if your design fits with what's called the "Shoreline Management Policy" or SMP*.

NEW SMP GUIDELINES:

- Maximum walkway width of six feet.
- Maximum size of 1,000 square feet (not including walkway).
- Can only extend 150-feet from shore or 1/3 the distance across channel, whichever is less.
- No roof allowed on second story.

**Seems confusing? Give us a call!
423-752-0708**

Design regulations resources.

SMP Guidelines:

https://www.tva.gov/river/26apermits/regs_c.htm#1304204

Pre-SMP Guidelines and SMP Waiver Worksheet:

<https://www.tva.com/Environment/Shoreline-Construction/Shoreline-Management-Policy>

Reservoir Land Management Plans help TVA make decisions when it receives requests for the use of TVA public land.

<https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/Reservoir-Land-Management-Plans>

*You may be eligible to apply for a waiver/permit that allows building a dock with less restrictive PRE-SMP guidelines. Waiver eligibility is determined by the SMP waiver worksheet listed above.

Should I care about water levels?

How the water level fluctuates at your waterfront is the biggest factor in the equation of building a dock.

Some bodies of water have records where their levels are tracked as feet above sea level. A competent dock builder should have extensive knowledge of each body of water he builds on and how water level changes will affect your dock.

Do I want a floating or a fixed dock?

Both types have pros and cons.

Floating docks follow the water level throughout the year so the height of the deck above the water stays the same. Fixed docks are attached to the bottom of the lake with no moving parts, which means lower maintenance.

A fixed dock is a good choice if the water levels in your area remain fairly consistent during boating season. Floating docks are ideal for locations with deep water or rocky bottoms where driving pilings for a fixed dock wouldn't be cost effective.

It's important to note, that this choice should be made by someone with experience. Especially when considering a floating dock. The floating dock market is highly competitive because assembling a prefabricated dock is much easier than building a fixed dock.

Anyone can claim to be a dock builder, assemble pre-made frames, attach the floats and tie some cables off to a tree.

In order to give you the lowest project bid, some builders will use cheap techniques to attach your dock to your shoreline.

Every floating dock should have minimum of two points where the dock attaches to the shore. Most experts agree on the best placement of these points. However, cheap and inexperienced builders often misplace attachment cables so that they are not perfectly aligned on the shore.

With this cable setup, builders place hand crank winches on the dock to make up for the improper installation, and this shifts the burden of maintenance, as water levels rise and fall, onto the owner. This is hazardous. Improper installation can rip the cable and winch off the deck after a change in water level.

If you're unsure about a dock contractor feel free to call us at **423-752-0708**

There isn't a one-size-fits-all answer for which material to use.

We know material selection can seem daunting, especially considering every manufacturer and distributor will claim their product is the best. The truth is, all products have advantages and disadvantages, and if a manufacturer refuses to disclose the disadvantage of their product, they're not being honest.

Build a dock to last. Don't cut corners. The value of the materials directly affects the life of your dock. Build with longevity in mind.

WOODS

Pros:

- Strong.
- Beautiful.
- Economical.
- One of our favorite materials to work with.

Cons:

- Most woods are prone to fungal attack under the right environmental conditions.
- A characteristic of wood is that it can swell and shrink as the levels of moisture ebb and wane. This can cause problems if not accounted for.

At Chattanooga Dock Builders, we use building techniques that take both of the listed cons into account to ensure longevity and effectiveness when we design a custom dock.



METALS

More often than not, the structural frame, and sometimes the decking, on the majority of floating docks is metal. Even fixed wood docks and floating wood docks incorporate metal bolts, pins, screws, nails and other fasteners.

There are three main types of metal used on docks:

1. Hot dip galvanized steel

(used in both structural components & fasteners)

- Stronger than aluminum or stainless steel.
- Heavier than aluminum.
- More susceptible to corrosion than stainless steel and aluminum.

2. Stainless Steel

(fasteners)

- Slightly weaker than galvanized steel, but more corrosion resistant.
- 5-7 times the cost of an equivalent galvanized fastener.
- More difficult to work with.

3. Aluminum

(structural components and decking)

- Light weight.
- More corrosion resistant than galvanized steel structural components.
- High strength to weight ratio.
- Weaker than steel and prone to fatigue failure if stressed excessively.

USING COMPOSITES FOR DECKING

PVC and Polypropylene composite decking are great alternatives to natural wood. One of our favorite decking products is called **ThruFlow** polypropylene decking.

MATERIAL LIFE EXPECTANCY

Using materials with a long life expectancy can be more expensive upfront, but expert builders recommend it. In the long run, using long life materials saves you money and headache because you're not frequently replacing a weaker/inferior component.

In most situations, combining both long life and inferior materials isn't recommended because inferior materials will need replacing. An example of this would be using stainless steel bolts in inferior wood. If the wood isn't high quality/long life, it will rot out long before the bolts fail. Here, it'd make more financial sense to choose less expensive bolts with a similar life expectancy as the wood.

**Unsure about material choices?
Call us at 423-752-0708**

COMPARING DECK OPTIONS

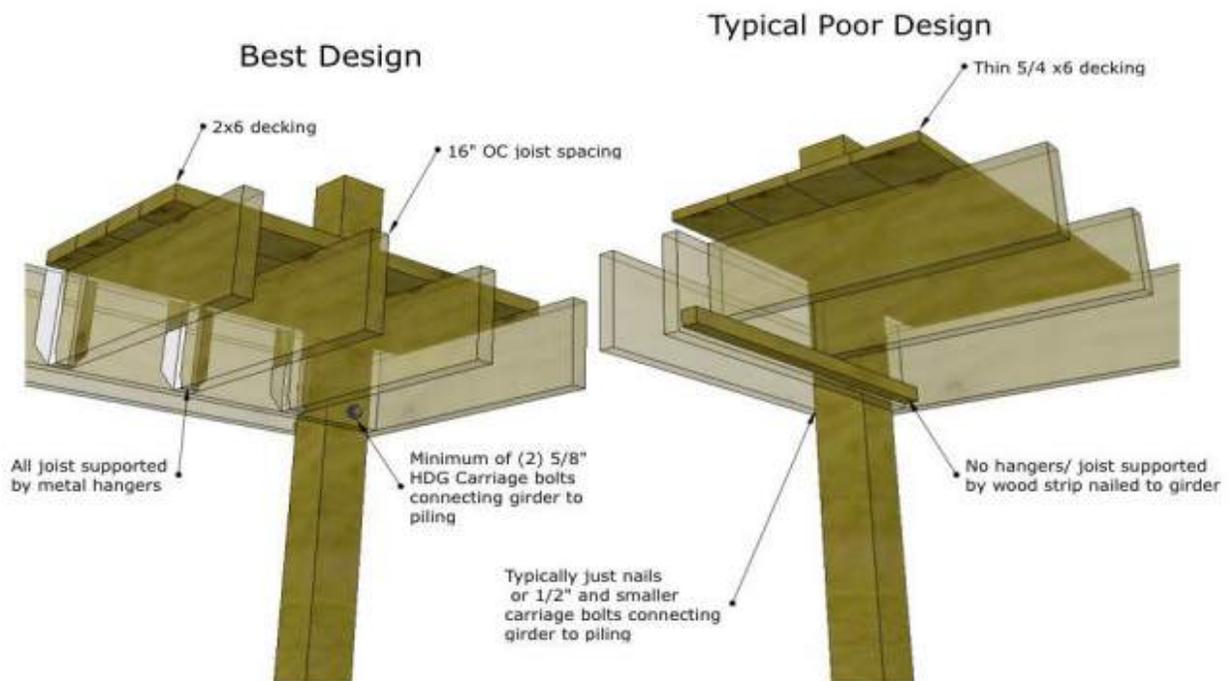
Decking	Price	Rot resistance	Hardness	*Expected structural life with no maintenance	*Expected structural life with maintenance	MFR warranty	Maintenance schedule	Maintenance
2x6 Pressure treated SYP #2	\$	low	soft	6-8 yrs	20+ yrs	N/A	Annual	UV inhibitor/ stain
1x6 Standard Composite	\$\$	moderate	medium	10-25 yrs	10-25 yrs	10-25 yrs	as needed	Clean
5/4x6 Siberian Larch	\$\$\$	good	medium	30+ yrs	50+ yrs	N/A	2 yrs	UV inhibitor/ stain
1x6 PVC Encapsulated Composite	\$\$\$\$	excellent	medium	20 yrs	20 yrs	20 yrs	as needed	Clean
Powder Coated Aluminum Panels	\$\$\$\$	excellent	hard	indefinite	indefinite	Life	N/A	N/A
Thru Flow Panels	\$\$\$\$	excellent	hard	indefinite	indefinite	12 yrs	N/A	N/A
1x6 pre grooved Garapa	\$\$\$\$	good	hard	25+ yrs	40+ yrs	N/A	2 yrs	Oil to maintain color/ UV inhibitors to extend life
1x6 pre grooved Cumaru	\$\$\$\$	good	hard	30+ yrs	50+ yrs	N/A	2 yrs	Oil to maintain color/ UV inhibitors to extend life
1x6 pre grooved Ipe	\$\$\$\$\$	good	hard	40+ yrs	80+ yrs	N/A	2 yrs	Oil to maintain color/ UV inhibitors to extend life



ENSURING QUALITY CONNECTION 1

As mentioned on page 9 regarding floating docks and poor connections, be aware of poor building techniques. To avoid sub-par builders, compare these connection details to what they're quoting you.

PILE TO DECK CONNECTION

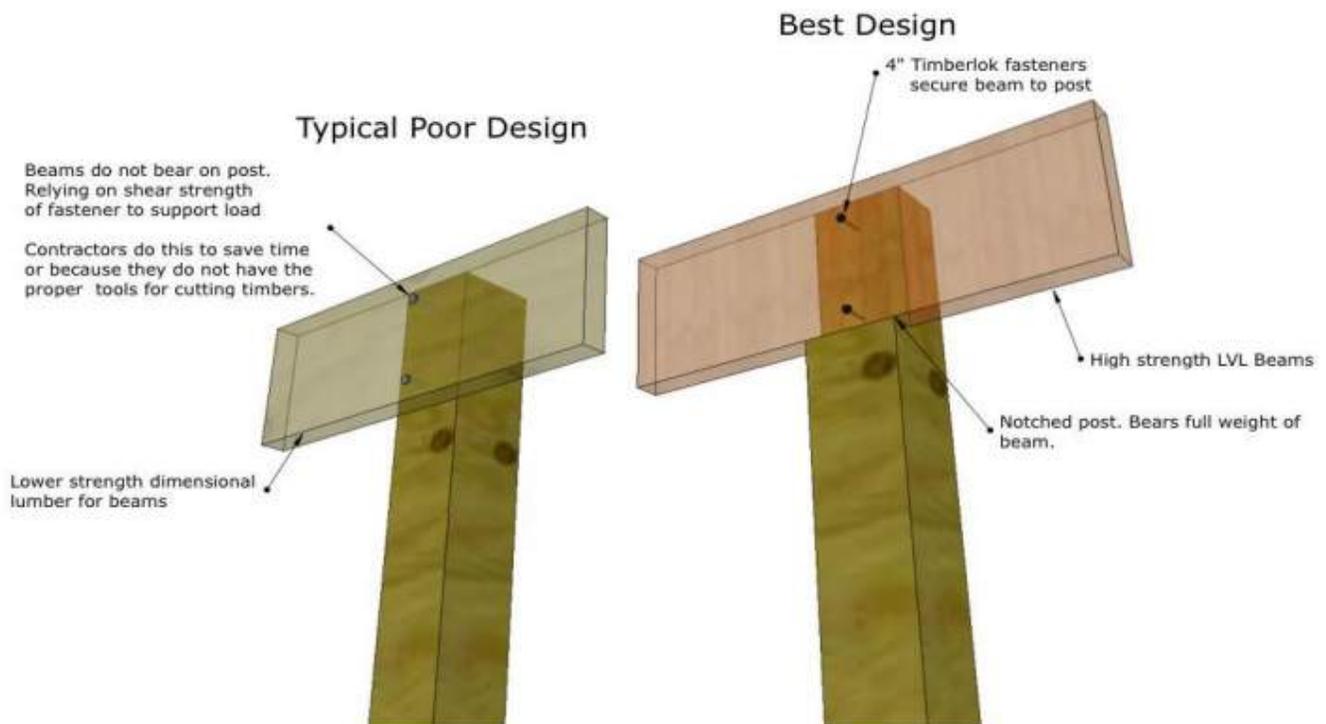


**Don't mess around with your dock.
If you want your dock built right,
call us at 423-752-0708**

ENSURING QUALITY CONNECTION 2

Of course, there are other best practice connections that are major factors in designing a dock that performs well. To avoid sub-par builders, compare these connection details to what they're quoting you.

POST TO ROOF BEAM CONNECTION



HOW IS MY DOCK BUILT?

Land-based construction

When land access permits, our “top-down” method allows us to construct docks by starting at the shore and then working outward. No barge or floating work platforms required. This allows us to build year-round, even after water levels drop.

Water-based construction

If you have a delicately landscaped backyard, or a steep slope leading down to the area your dock will go, construction will need to be done in the water. This is done by deploying modular work platforms, as well as bringing materials and equipment in by boat.

How long does it take?

On average, a dock takes four to six weeks to complete once construction begins, but, as always, there are many factors that determine actual completion time, including dock size and complexity.

The permitting phase plays a significant role in the time it takes to complete your dock.

If you don't submit a permit application, or contact a dock builder to help you with the process in advance, you may be setting yourself up for disappointment.

Permitting can take anywhere from 2 - 6 months, sometimes longer. So if you want a dock ready for use by June then you should be finalizing your design and submitting the permit application November - January.

If you wait until it warms up to start the permitting process, it's likely your dock won't be finished until the fall, when the boating season is wrapping up and everyone's winterizing their boats.

Need a dock built?

We hope that this document has been informative and helpful while you research and make steps toward owning your own dock.

If you have any questions, or would like to work with us, all you have to do is call

423-752-0708

or email us at

Daniel@chattanoogadockbuilders.com

When it comes to your dock, you and your family deserve a builder with experience and expertise, and it'd be an honor to work with you to achieve your dream dock a reality.



Chattanooga Dock Builders



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