



# SWIMMING POOL DESIGN GUIDE

Your complete guide to creating  
A perfect paradise in your backyard



A publication of



**neavepools**  
installation, renovation, & service

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# Introduction

# Introduction

Whether you cherish flashbacks of your children splashing in a baby pool or look back fondly on a warm getaway spent sipping tropical drinks in a cabana by the clear, shimmering water, it's safe to say *many* happy memories have been made around a swimming pool.



And now you're considering building a backyard swimming pool of your own — and building new memories to go along with it. Congratulations!

You've probably been dreaming about where it will be, what it will look like, who among your friends you'll invite over for the first dip and how great your tan will be — you may even be thinking about how much that pool will increase your home's value when you sell it someday — but before any of that happens, it's time to do some serious planning and preparation.

Our team of pool designers, installers and maintenance professionals have decades of combined experience in the industry. Using that

experience, we have put together a pool design guide for homeowners just like you. In the next few chapters, we'll go over the basics of pool construction — including choosing a contractor and team who can help you through the process without incident — plus a few more factors that will make your swimming pool uniquely *you*, from paving and shade structures to fun accessories and add-ons.

Still have questions when you're done perusing? That's where we come in. (Ready to dive in head first after reading? Well, that's where we come in, too.) Learn more at [NeavePools.com](https://www.neavepools.com), or contact our Neave Pools team at (845) 463-0592.



# Pool Construction Basics

# 1) Pool Construction Basics

If only building a beautiful backyard swimming pool were as effortless as enjoying yourself after it's finished — pool construction is one of those landscaping projects that takes considerable time and planning, not to mention a big investment.

But the time, planning and investment are all well worth it for the summers of fun and sun with your family and friends!

Don't be overwhelmed by the process; taken one step at a time, you'll be through the hard parts in no time. And with professionals at your side through every step, the hard parts won't even seem that way. (It could even be fun!)

Let's take a look at some of the major steps in the pool construction process.

## The Design Process

### *Step 1: Meet your pool-design partner:*

The first step in any new construction process is meeting the person who will guide you along your way. Any pool design, construction and maintenance company you work with should send a professional designer for a site visit on your property to talk about your dream pool.



At Neave Pools, we assign one to two professional designers to work with you throughout the design process to help you navigate the swimming pool design process and walk you through the projected timelines, and explore the varied options available for your pool and the areas beyond your pool, including decking, accessories, fencing and lighting.

During that initial meeting, we do a [Pool & Property](#) site inventory and analysis, which will help us discover your property's strengths and weaknesses. We want to make sure your project complements your home's existing architecture and fits into the context of your property and surrounding area. As professional designers, we take a holistic view: The design of the surrounding — landscape, patio, fencing and plantings — are just as important as the pool.

We will also talk during our initial meeting about project budgeting and construction timelines. It is important to have a rough project budget in mind, so we can design your dream swimming pool within your budget. During the first meeting, it is always helpful to be able to provide your designer with a survey of the property. This will help us design within your property's constraints, but it'll also smooth out the permitting process.

### *Step 2: Draw up a plan:*

There's a good chance you've been collecting inspiration for your backyard swimming pool for a while. Now's the time to share them all with your designer — and work together to design the pool that brings those ideas to life in one perfect, completed project.



Once you and your designer have discussed all your ideas, you should get several realistic options for pool designs. At Neave Pools, we use a realistic 3-D modeling program that gives customers a captivating visualization of how the pool will look after construction and installation.

### *Step 3: Bring your dream to life:*

The construction process begins with permits and inspections, grading and excavation, and more. It can seem like a long, daunting process, but any experienced pool design, construction and maintenance company will take care of every step for you.



Once the design is complete and construction is under way, your designers will take on the role of project manager. They will manage the construction process to give you the peace of mind that your project is being built just as it was designed. Your Neave Pools designer and point of contact will always keep you updated.

With Neave Pools, you won't have to worry about acquiring permits and inspections because we'll do all the work for you. Once all of the legal matters have been attended to, we will begin construction by bringing in our experienced pool construction teams to get started. Your Neave Pools design specialist will give you an estimated end date and work with you through the entire process to make sure everything is to your precise specifications.

## Timing and What to Expect

Any construction process is at risk for unexpected delays because of weather, permitting and many other factors — it's the nature of the beast!

But your pool design, construction and maintenance company should be able to give you a pretty good timeline with all the steps you can expect.

Here's a look at a basic rundown of the swimming pool construction process:

1	Contractor submits a timeline for your swimming pool project, including projected completion dates.	6	Install masonry, tile, coping, etc. around pool.
2	Secure permits from the necessary city and municipal departments.	7	Install pumps and filtration equipment.
3	Begin excavation and rough grading for all pool areas, including patio and flower beds.	8	Install pool patio, plantings, fencing, irrigation, lighting, etc.
4	Get building! Install framing and plumbing fixtures (and steel framing for vinyl pools).	9	Plaster pool and fill with water.
5	Install gunite shell or, for vinyl pools, floor and liner.	10	Balance chemicals and finalize opening prep while running final inspection.



# Materials and methods

## 2) Materials and methods

A pool isn't just a pool, of course. The design choices you make determine what will make your new backyard swimming pool uniquely yours, and it all begins with the material you select. That material is the first step in determining your options for shape, colors and accessories and add-ons.

Here's a couple of options to get you started.

### *Gunite / Shotcrete Pools*

Gunite is a shotcrete (concrete applied at high velocity) application process of a dry concrete mix applied at high velocity where water is applied at the nozzle. The Gunite shotcrete process is usually considered the permanent construction option as these pools if built properly can last for decades.



These swimming pools are fully customizable in terms of size, design and even add-on water features, including slides, sun decks, grottos and rock haunches (we'll talk more about these added features later). Owners looking for what is considered a unique, high-end swimming pool option often choose gunite.

Gunite swimming pools are also super durable, with less risk of damage. That sturdy construction gives them a much longer life expectancy: With proper care and maintenance, a gunite pool's plaster finish will last from 12 to 20 years.

### *Vinyl Pools*

Vinyl is the most popular material choice for swimming pools. It's cost effective, attractive and soft to the touch, which makes it ideal for cost-conscious homeowners, particularly those with children.

Recent advancements have made it much easier and less expensive to customize vinyl pools than in the past, from different sizes, shapes and liner patterns, to special features and add-ons such as integrated steps and lounge areas.



It's also far simpler to treat and maintain vinyl pools today, thanks to more advanced cleaning and sanitization systems. Yesterday's concerns, such as fading colors and cracks that lead to leaks, are more easily addressed with automatic pool cleaners, saltwater systems and even leak-detection and repair systems (even simple patch kits). With regular, vigilant maintenance, vinyl pools can also last 15 to 20 years before the liner needs to be replaced.

## Form and shapes

### Free-form:

Depending on the design of your home and landscape, you may want a free-form design, and your best choice for a free-form design will be a gunite swimming pool, which features sprayed concrete that can take just about any shape you could imagine.

### Geometric:

Though there's much more design freedom in vinyl swimming pool liners today than in the past, most vinyl swimming pool liners will still take on a more uniform, geometric shape.

Again, the swimming pool form you choose for your backyard installation will be dependent on your preference, but your budget will also come into play. Let your imagination — and your designer — be your guide!

## Sizing and locating

How big should your pool be? Where should it be located? These are both important questions you'll need to ask before beginning the design and construction process.

Of course, you'll want to think about how much room you actually have in your backyard to begin with. But you should also consider who will be using your pool. Do you have children? Will anyone be swimming laps? Will you be installing a diving board that requires a certain swimming pool depth?

Your swimming pool's location is dependent on the physical layout and size of your backyard, too, but it's also a matter of who will be using it. If you have

children who will be swimming, you'll probably want to locate the pool within view of your main outdoor living areas as well as inside your home, if possible. If you're building a relaxing swimming pool for adults, you may want to choose a more secluded area of your lawn, away from the house and other outdoor living areas.

Beyond these initial questions, your swimming pool designer will be able to assist in these decisions during your [Pool & Property Assessment](#) site visit.

## Cost considerations

There's a swimming pool for just about every homeowner's budget — and many, many factors that affect how much your swimming pool ultimately costs.

Important cost considerations include the custom aspects of the design you choose, such as the accessories you select to make your pool more beautiful or more fun, regardless of whether you choose a gunite or vinyl liner pool. Beyond the swimming pool itself, the type of paving you use in your pool deck can impact the total cost, as well as other hardscaping, shade structures and more.

It's also important to keep in mind, though, that beyond the initial costs of designing and constructing a swimming pool, you'll also need to maintain it for many years to come.

Constant attention to your pool's maintenance and upkeep will ensure that your investment is protected for many years to come — and the tools and chemicals to do that maintenance costs money as well.

Your pool design and construction contractor will likely have ongoing maintenance options for you to consider after your swimming pool's construction is complete. (Neave Pools certainly does!)



Outside Your Pool

## 3) Outside Your Pool

### Pool decks and patios

The style, size and shape of your patio are entirely up to you, but your pool contractor should also help you plan and build a pool deck or patio surrounding your pool that's best suited to your taste and landscape.



You may choose to build a pool deck that blends in seamlessly with the rest of your landscape and even the style of your home, but you may also want to create a dramatically different area to really set your pool oasis apart from other parts of your landscape.

### Materials

Any material you choose for your pool deck or patio should be able to be treated and finished for weather and UV protection.

You should also select a surface that will still offer ample traction when wet and stay as cool as possible to protect bare feet that have just come out of the pool. Beyond that, the surface materials you choose will depend only on your tastes and your budget! Here's a look at a few different paving options.

## Concrete

Concrete pools are cost-effective above all. Design-wise, they vary from plain gray, much like a sidewalk, to decorative, stamped-concrete pool decks in any pattern and color scheme you can dream up.

Concrete is also relatively easy to take care of and durable, and you'll only need to reseal it every few years.

The downside to concrete and it is a big downside: It's always susceptible to cracks and in our climate it usually does. Some concrete pool deck finishes can also be slick when wet, which you should consider extra carefully if you have kids running around nearby!

## Natural Stone

The biggest benefit of a natural stone pool deck is the design freedom it offers; this is your option with the most choices. You could select irregular flagstones for your pool deck to create a beautiful, natural look, or choose dimensional stone with a more uniform appearance, which will offer more precision during installation.

If your pool contractor properly installs your natural stone paving, it will last a long time with no cracks. It will also be simpler to make a larger pool deck later on by simply adding more stone.

If you're on a budget, natural stone can become expensive quickly. Some homeowners like to use it as coping around their pool's edge for a big effect with a smaller price tag. You may also decide to "dry lay" the stone on a crushed stone and sand base — which is more cost effective — or mortar it on a concrete base.

Natural stone also can shift and move over time, especially if your excavation requires a lot of grading or backfill. Weeds can grow among dry-laid stones, something to consider if you prefer a very clean look.

## Brick and concrete pavers

Brick and concrete pavers are a classic design choice that can be stunning around a clear blue pool. In addition to the design freedom of various bricklaying patterns, you also have a choice between concrete and clay pavers for your swimming pool deck. Concrete pavers are available

in plenty of shapes and sizes, from rectangles to triangles and hexagons, and different colors, from grays and browns to true brick red. Clay pavers are manufactured in traditional rectangles.

Brick can be a bit more expensive because of the labor required to install it, and it also requires more care to prevent shifting and breakage. (Its biggest pitfall in a poolside application is heat retention — watch those feet!) But it provides an elegant look in any landscape, if that's what you're looking for.

Neave Pools is a division of [Neave Group Outdoor Solutions](#), a full service landscape design, construction and maintenance company — so in addition to installing and helping to maintain your brand-new pool, your landscaping, hardscaping and other outdoor living needs will also be covered by our green industry professionals.

## The surrounding landscape

### Best plants for around pools

The best plants to install around your new swimming pool are ones that provide the look you want — interesting foliage, color and possibly shade, if desired — but won't make a mess by dropping leaves, petals and other natural debris into your pool, complicating your cleaning and maintenance routine.



Container gardening is one of the quickest ways to dress up any landscape area, especially around your backyard swimming pool!

You can transform even a simple pot into a brilliant display with a surefire container mix — fillers, spillers and thrillers — in a variety of colors, shapes and textures. This also gives you the freedom to explore different types of poolside plantings without committing to a year-round bed.

Five of Neave Pools' favorite poolside plantings:

1. *Weigela 'Wine and Roses'*: This trouble-free plant grows quickly and provides dark, glossy foliage with pink trumpet-shaped flowers that hummingbirds love
2. *Andromeda*: This shrub's evergreen leaves are deer resistant, and in the early spring, the plant produces beautiful sprays of bell-shaped blooms. Keep in mind, *Andromeda* does best in shade, so keep it out of full sun.
3. *Hydrangea 'Penny Mac'*: This classic macrophylla, advertised as "perfect for the lazy gardener," has gorgeous mophead blooms throughout the summer.
4. *Russian Sage 'Little Spire'*: This cold-hardy perennial requires very little care once it's established, providing beautiful light-purple blooms against a gray-green backdrop of foliage.
5. *Buddleia*: True to its name, butterfly bush will attract many fluttering friends to your poolside, from butterflies to hummingbirds.

#### ***What plants not to use near a pool***

You should also keep in mind that a backyard swimming pool creates a microclimate of sorts, raising humidity levels and often elevating the temperature nearby as well. Chlorine and other chemicals in the water will likely splash up onto nearby plant life, so any landscaping that's highly sensitive or susceptible to those factors probably isn't the best choice.

#### ***Other considerations***

Whether you want to replicate your pre-pool landscape plant by plant or create something entirely new to complement your swimming pool, if you have more specific questions about what types of plants to install around your swimming pool — your pool contractor should be able to answer them.

### ***Pool fencing and enclosures***

Pool enclosures are a required and important addition that you shouldn't overlook when designing your new swimming pool. Whether you're simply looking for privacy, keeping unwanted visitors away from your pool, safeguarding your children while they play or just keeping leaves and other natural debris out of the area, a pool fence or other enclosure is the way to go.



Pool fences and enclosures are available in a variety of different colors and styles to coordinate with the design of your outdoor living space, so you won't have to worry about sacrificing visual appeal for your privacy and security.

If your neighborhood association or municipality has regulations in place for fence height and other factors, your pool designer should be able to help you select an enclosure that abides by local standards and codes while protecting you and your family.

The cost of fencing can add up quickly, so be sure to discuss this in your budget-related conversations with your pool contractor.

## Pool houses and shade structures

### Pool houses and cabanas

Want to create a total resort experience right in your own backyard? You might consider adding a multipurpose pool house or cabana. It's not only a great place to store pool equipment such as skimmers, tools and replacement parts, and chemical supplies, but with the right furnishings, it could also double as a changing room for your pool guests or a guest house for visitors.



The opportunities are almost endless: You could even add a refrigerator, some outdoor kitchen equipment and a table and chairs, and create a space to relax and grill while the kids enjoy splashing in the pool.

### Pergolas

If you aren't quite ready to commit to an enclosed structure by the pool but still want a little refuge from the heat and sunshine after your swim, a pergola may be the right structure for you.



Pergolas are wooden or synthetic structures that can be built in many styles and sizes — the one common feature is permanent overhead shade and weather protection! They make great poolside enclosures as well as outdoor dining areas and simply decorative accents for your outdoor living space.

There are other shade structures to consider, too, from shade sails to cantilevers. Ask your swimming pool contractor for advice on the best one for your landscape!



## IV. Accessories & Special Features

## IV. Accessories & Special Features

A beautiful new pool will be wonderful all on its own, but the real fun happens when you begin to explore swimming pool accessories and special features.

Let's take a look at some of the most popular options, from the most basic and practical to the whimsical and lavish.



### *Utilitarian additions*

#### **Auto-covers**

An auto-cover is one of the simplest, most surefire ways to protect the investment you've made in your swimming pool. Pools will always be susceptible to outdoor debris, including plant material and other items that can throw off your water's chemical balance, clog the pool's filtration and pump system, or cause leaks in vinyl liners. (Even the smallest piece of debris can do any of this damage!)



These covers provide a virtually impenetrable barrier between your pool and its surroundings. It's a great safety feature for families with small children but also helps insulate the pool and lower heating costs. Auto-covers can be pricey, but they eventually pay for themselves by reducing your heating and chemical costs.

### **Pool lighting**

Swimming pools are great for having fun in the sun, but what about when the sun goes down? Pool lighting can provide a beautiful underwater accent, whether you're taking an evening dip, enjoying late-night conversations poolside or gazing at the pool from indoors.



And because Neave Pools' design professionals work closely with the lighting experts at Neave Group Outdoor Solutions, we can work with you to create a beautiful lighting design scheme that extends far beyond underwater illumination and throughout your landscape.

<http://www.neavepools.com/pool-features/pool-lighting/>

### **Pool heating**

One of the nicest things about having a swimming pool in your backyard is the ability to regulate the temperature just to your liking. Most residential pools' temperatures will fall between 78° F and 82° F — but it's completely up to you!

There are many types of pool heating systems, from traditional models powered by propane, natural gas or electricity to eco-friendly options that use

cost-effective solar power, geothermal dynamics and more.



Your designer should be able to explain the differences, and the pros and cons of each heating system, and help you decide which unit is best for your needs, in terms of comfortable pool temperature as well as initial and operational costs.

<http://www.neavepools.com/pool-features/pool-heating/>

### **Pool automation**

You've realized by now that building a backyard swimming pool is a huge investment, and one that comes with a great deal of responsibility. But there's plenty of technology available today to shoulder some of that responsibility with automation!



Pool heating is one of the many factors that can be automated to make your life easier, such as keeping the temperature low when you go away on vacation, saving you money and conserving energy as well.

There are also systems that will deploy and retract your pool cover, adjust the pool's lighting, help keep the pool clean and even monitor chemical

levels remotely — all with the touch of a button or twist of a dial.

<http://www.neavepools.com/pool-features/pool-automation/>

## More fun in the pool

### Spas

If you're looking for somewhere to relax outdoors, even when it's not quite warm enough for a dip in the pool, consider a spa. You can customize nearly everything here as well, too, from size and seating to jet positioning and lighting.



### Slides

If you've ever seen a line for the slides at a water park, you know how popular they are with children both young and simply young at heart. Slides are one of the easiest features to add to any pool...and certainly one of the most fun, too!

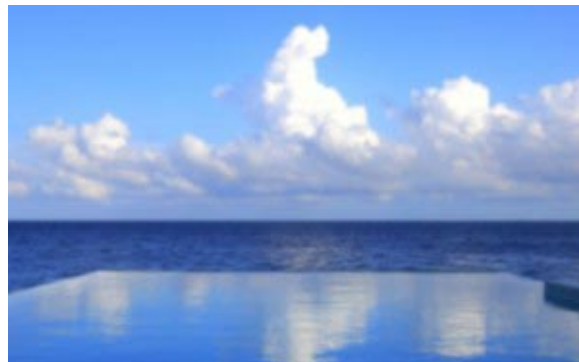
Despite their simplicity, there are still design and construction considerations you'll have to make — including building a patio or pool deck large enough to accommodate it and providing a water supply to keep the slide's surface slick and great for sliding! — so be sure to tell your swimming pool contractor if you're interested in adding a slide for extra pool fun.

## Luxury within reach

### Infinity pool edges

Infinity pool edges — also known as negative edges, zero edges and vanishing edges — offer a unique, high-end look many have seen only in

luxurious hotels and spas. Creating this effect requires a great deal of structural and mechanical engineering, but it's worth it to achieve this incredible and popular look!



The best time to consider an infinity edge for your swimming pool is during the initial design phase — when your pool contractor can make all the necessary arrangements — but you can also explore retrofitting a current pool or adapting an existing design to include a vanishing edge, too.

### Water features

You can transform your swimming pool into an even more beautiful decorative landscape feature by adding a water feature. Waterfalls and sheer descents — originating in a grotto or another standalone structural feature — offer a simple but stunning visual effect, and features like laminar jets arc impressively over your pool in a feat of physics and mechanics.



Water features add beautiful aural ambience, too. For example, the sound of running water from a waterfall in your pool can create a sense of serenity for anyone within earshot.

There are water features to suit every design taste and pool budget! If you see something that inspires you — in a magazine or in nature — share it with your contractor to incorporate your inspiration into your pool's design.

<http://www.neavepools.com/pool-features/water-features/>

### **Grottos**

Create a private getaway *within* your private getaway: Add a grotto to your backyard swimming pool! A grotto is a hidden-away, cavelike area that can offer peace and quiet like nowhere else in your outdoor living space.



Grottos offer the same design freedom as other luxury pool additions: Lighting, other features such as waterfalls, nature stone enclosures and more are all up to you. You could even build a grotto that houses an intimate spa! Your swimming pool contractor can guide you through the materials, layouts and design options available.

<http://www.neavepools.com/pool-features/grottos/>

### **Sun shelves**

Beat the worst summer heat with a special shallow spot in your pool that allows you to lounge, read a book or enjoy a cool drink while still cooling down in the water. A sun shelf (also known as a Baja shelf) is an oversize step at the edge of your pool, and they're relatively simple to add to your gunite pool. Sun shelves don't occupy much space in the pool, and they can be installed as shallow or deep as you'd like.



For families with small children, sun shelves can also help kids feel more comfortable in the pool as they learn to swim. Adding a sun shelf to the shallow end of the pool will offer a solid surface for little feet to get used to being in the water and playing, under the proper supervision.

<http://www.neavepools.com/pool-features/sun-shelf/>

### **Beach entries**

Why jump into your pool when you can glide gracefully into the water? A beach entry simulates walking into the ocean at the beach, beginning with a specially graded deck that eases into a stylized ramps or smooth steps that let you gently wade into the pool instead of taking the plunge.



Like sun shelves, beach entries can be perfect for families with small children who would rather splash around in shallow areas — and they're also great for elderly homeowners who enjoy the pool but need a more gradual entry to the pool in their later years.

Some beach entries incorporate real sand for a true beach feel, but others simply blend seamlessly from the rest of your landscape into your swimming pool. The design is up to you and your contractor!

<http://www.neavepools.com/pool-features/beach-entry/>

# In Closing

The excitement you feel as you collect your photos and other inspiration — and read through this design guide — are nothing compared to the thrill of actually beginning the design of your brand-new backyard swimming pool.

## Are you ready to get started?

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Contact Neave Pools to get the ball rolling with a [FREE PROPERTY AND POOL ASSESSMENT](#).

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Call our experienced pool designers at

**(845) 463-0592**

or visit [NEAVEPOOLS.COM](http://NEAVEPOOLS.COM) to

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fill out our online form and request an in-person visit.

We'll have you splashing around in no time. With the seasoned professionals at Neave Pools working with you every step of the way, your biggest worry may just be whether your bathing suit matches your beach towel.

Don't let another summer pass by and leave you high and dry! Let's dream up your backyard pool today.