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Preface

Hello, my name is Paul Habeck, owner and president of North Eastern Pool and Spa. All of us at North Eastern and myself would like to thank you for the purchase of your new in ground pool!

The purpose of this booklet is to help facilitate our mutual goal of the smooth, timely and successful installation of your new in ground pool and to enhance communications, expectations, and your overall experience with our company. It has been comprised from input from all our senior staff to help make it as informative and easy to understand as possible.

The booklet is formatted in "general rules of thumb", as many installs can vary greatly in size, scope, and complexity. Equally important is the work that we may not be doing, such as the landscaping and fencing.

We are also listening to you, the customer. We generally receive quite positive feedback from our customers regarding the whole experience of the installation and the quality of the result. However, it's not always perfect and there can be challenges along the way. There are the occasional unforeseen or perhaps even overlooked issues, but the most challenging typically is what we cannot control, and that's the weather.

Communication and expectations are also extremely demanding, given the fast-paced nature of this seasonal business. We are listening and working on ways to combat this, including this booklet and additional help in the "new in ground division" management.

We are also doing much more with e-mail for updates and information during the construction process. This has proven to be quite effective and help reduce "phone tag" or the need to contact a customer when they are busy at work. **If you do not use e-mail, please let us know.**

When your pool is complete you will also receive an "Owner's Manual" that will have helpful tips and information on operating and maintaining your pool. The goal of the manual is to keep you up and running as trouble free and economical as possible. We are also working on improving our presence in social media and our website.

In conclusion, **please take the time to read this booklet.** It will help you better understand and prepare for what is about to take place in your backyard. Do not hesitate to provide feedback for this document so we can make alterations to ensure that it is as helpful as possible.

I hope you have a great experience, and we look forward to establishing a long-lasting relationship and continued service for many years.

Welcome to our family business here at North Eastern Pool and Spa.

Sincerely,

Paul Habeck

President, North Eastern Pool and Spa

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Pre-Construction

A. Overview

As you may imagine, there are several steps that must happen before we can come out and start digging your pool. This section will help to explain what those steps are. It will also cover what aspects of the project you will need to consider before we can begin to build, information you may need to provide to us here at North Eastern, and what, specifically, you can expect from us.

You will discuss several key elements with our Site Manager, John Nesbitt, including elevation, potential drainage, the layout of the pool, equipment location, and any additional considerations that may affect your pool area, such as landscaping and fencing.

John will need some important information from you which can be found on the *Checklist of What to Provide/Discuss with the Site Manager* in the *Layout Summary* chapter. Your primary contact during the initial pre-dig phase through the completion of the shell of the pool and the concrete bottom will be John Nesbitt. After that, Debbie and Alyssa will be coordinating the balance of the work such as the liner install, masonry, electrical, etc. through to the final punch list, operations, and completion of your project.

We will also be responsible for several imperative steps before any excavation or construction can take place. These typically include applying for and obtaining your building permit and calling “Dig Safely” so a “stakeout” can be performed. A stakeout is when the various utility companies are notified to come and mark out where their pipes or conduits are, such as water, electric, cable, gas, etc.

Please note that certain things like septic systems, electrical services to outbuildings, “invisible fence,” sprinkler lines or gutter drainage pipes are not part of the stakeout as these types of things are not typically documented. These are things that “Dig Safely” or North Eastern are not responsible for in the event something we are unaware of is hit. Be sure inform us of anything you are aware of that may be buried in your yard.

It is also possible that a private contractor may need to be hired by the customer to accurately locate a private utility in the ground (I.E. an electrical feed to an outbuilding or leach fields).

On rare occasions a customer may be responsible for these steps themselves. Be sure to review your contract if you are not certain.

We will also layout your pool in your yard to be sure you are satisfied with the location, size and shape. We will go over this in more detail in the following chapters.

Please do not hesitate to contact your salesperson, or John if you have any questions prior to the construction of your pool. Any changes must be accompanied by a change order which is done with your salesperson in advance of the actual start date. Changes after the construction has started are not recommended and can delay the building process.

B. Permit/Town Requirements

Requirements can vary tremendously from one township to the next. They also can change from one year to the next, and certain things like “setbacks” (the distance something must be from a property line or structure) may even change from one neighborhood to the next within the same town. Fencing setbacks vary, and in some instances, may even require a separate permit. Some towns will not allow pool equipment to be placed on the side of your house, only the back. We deal with over 25 different localities. The variables are too numerous to mention them all.

Therefore, the permit application and the need to have it approved before we can start any construction is mandatory.

This may all sound a little scary, but we do this well over 100 times per year, that’s what we do. However, we cannot start this process without a copy of your instrument survey map, commonly called a “tape map”. The tape map needs to be to scale as well. This is one of the requirements we will need from you. You can often find this with your home mortgage papers or the town may have a copy of it on record.



Here is an example of a “tape map”

If you do not have a “to scale” copy, you may need to contact the original surveyor for a copy as many times they will not release this information to us, only the homeowner. Once we have

the permit in hand, it will need to be displayed on site until the final inspection. This is done by placing it inside one of your windows where it is easily visible.

C. Layout Summary/Checklist

Prior to excavation, our Site Manager will contact you to lay out your pool. This will require you to be on site with him, so you can go over several key aspects of your project. The layout process typically takes anywhere from one to several hours, depending on the complexity of your project. We will use marking paint to spray the shape and size out on the ground and determine step and light locations. At this point you will be able to see how your pool will fit in relation to your yard and, if necessary, make any last changes to size, shape, or location.



Some of you may be working with a professional landscaper and already have a detailed drawing for us to follow. However, in many instances, patio size, landscaping and fence details will evolve as the project commences.

Be sure to contact your salesperson if there are any changes to the scope of work so they can draft up a “Change Order” and have it processed accordingly. If this is not done it could create a delay in, or complications with your project.

Please be sure to have a copy of your “to scale” Instrument Survey Map (tape map) available for our Site Manager when he arrives. He will need this to be sure the desired location of the pool is an acceptable place to build based on lot lines, variances, or other factors shown on the map. He will also need it when he applies for your building permit, as previously mentioned.

Several other topics that are in this manual will need to be discussed while you are meeting with our Site Manager. See the following check list.

Checklist of what to provide/discuss with Site Manager:

- ❑ **Instrument Survey Map (tape map)**
- ❑ **Location of any underground obstacles (non-utility):** This would include sprinkler systems or septic systems, drainage pipes, electrical lines, etc. Also, any knowledge you may have of adverse conditions such as bedrock, groundwater, or bury pits. North Eastern cannot be responsible for damage to, or any additional costs incurred by any underground complications that we are not made aware of.
- ❑ **Above ground obstacles:** Sometimes it may be necessary to move or remove items like trees, swing sets, sheds, or other objects above ground. The homeowner is responsible for the removal of such items.
- ❑ **Preferred location for access to bring in building equipment:** Please keep in mind that we will need to get a full-size excavator, Bobcats, and concrete trucks to your excavation/construction site. We do our best to leave as little a footprint as possible while excavating and building your pool but because of the enormous weight of the machines and material necessary to build your pool North Eastern cannot be responsible for damage to your lawn, driveway, or any other landscaping.
- ❑ **Elevation of your pool:** The finished height of your pool is referred to as the elevation of the pool. In most cases the elevation of the pool will be set in such a fashion as to use the excavated soil from the pool on site. However, depending on the slope of the yard and the desired location, some sites may require extra dirt to be brought in or removed. This is always on a project-by-project basis and may be an unknown at the time your contract is signed. After discussing your project’s needs with our Site Manager, he will inform you if there may be any additional trucking involved which would result in additional costs.

Please be sure to review the section dedicated to Elevation for additional information.
- ❑ **Drainage around pool:** This also varies greatly from project to project. Many pools do not require any drainage work around them at all, but if it is needed, it is imperative that it is installed correctly. Our recommendations should not be ignored or simply disregarded, as major complications could occur that would be out of our control. We do not typically do drainage work as it is generally incorporated into whomever is doing the landscaping. For an additional cost we may do some specialized drainage or re-working of existing drainage that may encroach on the new pool location.

Please be sure to review the section dedicated to Drainage for a complete explanation as to why this is imperative.

□ **Pool equipment location:**

See the section dedicated to this for additional information.

- **Liner pattern:** Please finalize your liner pattern choice, at this time, if you have not already done so.

- **Landscaping, concrete decks, and Fencing:** All information regarding landscaping plans around the pool, patio concepts, and fence locations should be provided as soon as possible. If they are not available, or decisions are still being made prior to excavation, be sure to contact us with updates as they arise.

See chapter 4 for additional info on concrete decks and fencing.

- **Special accessories and safety covers:** If you are doing anything such as a slide or water features, they must be planned for ahead of time. Safety covers, if applicable, must be planned for as well, especially if there will be a need for any alterations or cut outs (I.E.- a slide) or if you are doing pavers. See chapter 5 for more information on safety covers.

D. Elevation

In the pool world “elevation” is the term we use for the finished height of the pool patio, also referred to as “the deck,” in relation to a fixed location somewhere on your property such as an existing deck, part of your house, or a specific location or point in your yard. In simple terms- how deep are we going to put it into the ground.

Elevation also works hand in hand with drainage that may be required around a pool and whether we will need to truck dirt in or out.

Generally, on yards that are pretty level, we will set the elevation of the top of the pool about a foot or so out of the ground. This will allow us to use some of the excavated dirt to backfill the pool with a slight taper on all four sides back to the original ground level. The end result will look natural and drainage should not be required as natural run-off of precipitation will occur. This is ideal but not always possible for yards with steep grades or if there is a need for a specific elevation.

It can be difficult for the homeowner to envision a finished elevation when laying out a pool. The tendency is for the homeowner to want to sink it too low in the ground. This can create major problems with drainage as we don’t want the pool to be the lowest point in the yard, so please rely on our expertise when we are establishing the elevation of your pool.

E. Drainage Requirements- # 1 Importance

It is extremely important to have proper drainage around an in-ground pool. Even the best built pool can suffer severe consequences from lack of or poor drainage and/or landscape designs that do not consider drainage issues around the pool.

When we use the term “Drainage” in relationship to a pool we are referring to the ability of the pool and its surroundings to shed water (rain or snow) away from the pool area. Proper drainage should be able to accommodate the most severe rainstorms and the wettest springs. We are not referring to the “Water Table” or ground water. That is something that rarely comes into play once the pool is built.

Improper drainage most commonly causes an erosion of soil under decks or pavers leading to settling and “floated liners” (water between the liner and bottom of pool). Both issues can have a huge negative impact on the success of your backyard project.

Many pools will be built slightly higher in the ground than all of its surroundings so that there is positive drainage away from the pool around the entire perimeter of the pool. This is a very simple detail that usually doesn't require any additional drainage work, and will look and function quite well. However, in some cases people may be trying to achieve a specific elevation, or the yard slopes so much that positive drainage all the way around would not be practical. These situations may require additional drainage considerations. A good rule of thumb is to never “land lock” rainwater run off by any means such as berms, retaining walls, or higher elevations without providing drainage accommodations like piped drain basins, drain tile or, swales etc. Also, it may be necessary to divert water run-off from other sources such as hills or gutters that drain towards the pool. There should never be any standing water around the pool area. Bottom line – **ALL WATER MUST DRAIN AWAY FROM THE POOL** and not be allowed to “seep” into the ground in close proximity to the pool.

A good analogy is to think of it like the basement of your house. Most people understand it is not a good idea to have water “back drain” towards your house, or have areas where water “ponds” around your basement. This same concept applies to your pool.

Many quality installations have become problematic by landscaping details or grading done by others well after the pool has been installed. These problems can come about very fast with severe drainage issues or develop over a long period of time with less severe drainage issues. Please bear in mind that **drainage must be able to accommodate severe rain storms** (several inches of rain in a short duration) as well as spring conditions with snow melt off and highly saturated soil conditions.

A common mistake, especially on narrow walkways (3' to 4') is to not backfill the concrete sidewalks with soil once the masons have removed the forms. In fact, we often see where the soil might even pitch back a bit towards the pool creating a “gutter” effect where it becomes easy for water to migrate under the concrete decks as opposed to draining away from pool. It is very important that deck edges are backfilled a minimum $\frac{3}{4}$ the way up before any decorative stone or mulch is placed around pool so that water will drain away. Please call us if this has not been done, prior to you or your landscapers completing the finish landscaping.



Figure 1

In figure 1 above, the concrete forms have been recently removed. Suitable fill must be packed in against the concrete decks so rain water will drain away from edge of deck as opposed to running underneath the deck as the garden hose in figure 2 illustrates. **It is mandatory that the concrete decks get “backfilled”**



Figure 2

Rain water and snow melt will migrate under the decks as shown here when the grade does not pitch away from the pool. This can cause erosion under the decks and possible floated liner. ***This is the #1 mistake preventing water from draining away from the pool!***

If you are installing pavers up to your 4' or less concrete walkway, it is highly recommended to have perforated drain tile placed underneath the concrete deck where the pavers meet. The drain tile must have pitch and drain to "daylight" out and away from the pool. This is necessary even if the pavers continue to pitch away from the pool as water runoff from the concrete deck will find its way between the deck and the pavers, even with the proper install of a high grade polymeric sand.

To avoid this, we recommend a perforated drain pipe be installed immediately underneath the concrete deck with a positive pitch to "daylight" or by tying into an existing drain line such as a gutter lateral.

See figure 3 and 4. This is a competitor's pool that is an extreme example of poor execution of backfilling the pool (no soaking, and concrete decks were poured too soon after inadequate backfill) and then pavers put in with virtually no pitch and no provisions for "drain tile."

This pool liner floated after even minor rains.

The pavers had to be pulled back to allow for drain tile to be installed and they also had to pump in a flowable fill to fill the "hollows" under the concrete deck (very costly as you might imagine)



Figure 3



Figure 4



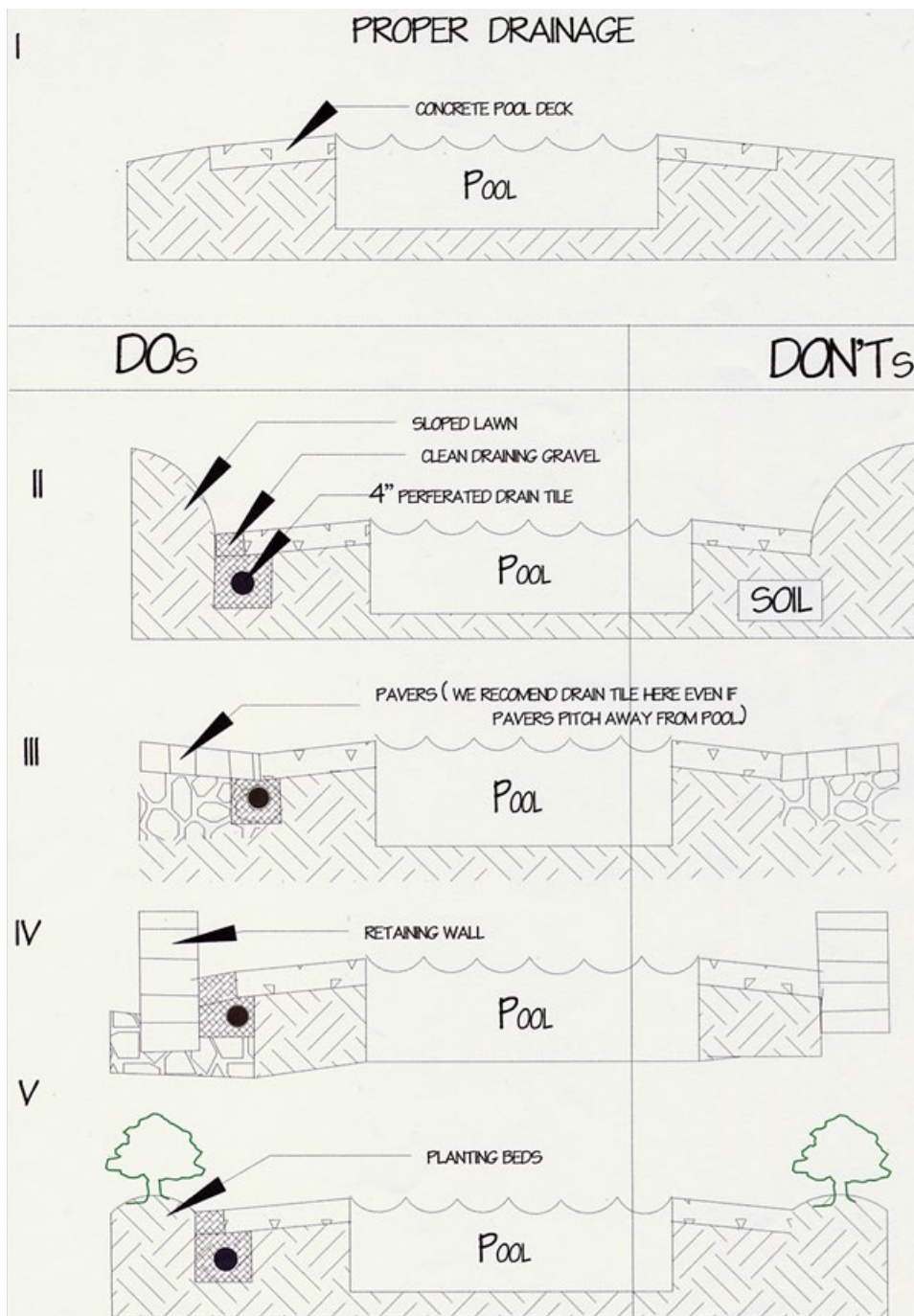
Figure 3

Here is a good example of an older pool where adding some nice landscaping went bad as the contractor did not consider drainage. As you can see, rain water will “pond” and has nowhere to go, so it seeps into the ground, further eroding soil under the decks and the water ends up between the bottom of the pool and the liner causing a “float.” Even the best grade of polymeric sand will break down where the pavers meet the deck.



The fix was to remove the brick pavers where they met the deck and dig down and put drainage pipe in and have the water drain around the pool and out, exiting the pipe to “daylight” on the other side of pool. See arrows.

This was an extensive amount of work that could have been avoided. We installed drain pipe and a new liner as well. The customer has not had an issue since. This is what we mean when we say do not let water “pond” in close proximity of the pool. All water should drain away over the surface naturally, or be carried away by other means such as “drain tile.” **Avoid landscaping details such as above that would be extremely costly to rectify afterwards. Properly planned drainage will ensure that all water is carried away from your pool which will in turn protect your concrete decks, prevent pavers from settling, and prevent “floated” liners.**

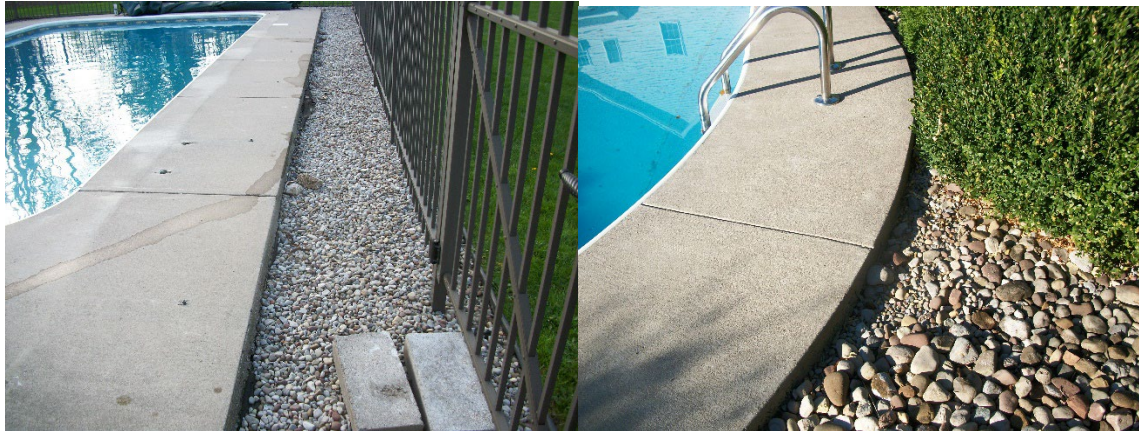


Above sketch's are very basic "do's and don'ts" lets go over them!

1. Shows pool with concrete decks that drain away from pool and decks have been "backfilled" after the concrete forms were removed to prevent water from running under decks (very important that decks are backfilled after forms are removed)

North Eastern will do this at final machine grade if we are there after the decks are poured.

Many times, customers may be using their own masons or professional landscapers take over the job after decks are poured and this gets overlooked and gets filled in with decorative stone or mulch that will allow water runoff to go under decks. This is # 1 drainage problem we see! See pics below of what to avoid



2.

North Eastern will be happy to answer any questions regarding this issue at any time. Also, make sure you adhere to and understand the need for the soaking and settling procedure that follows after we “backfill” your pool. You will receive notification and instructions on this once your pool has been backfilled.

If need be we can arrange for someone to meet you, or your landscapers, or both to discuss details that will work at your location as the project moves forward. This is an extremely important aspect to the success of the final project. We have also included some illustrated pictures in the back of this manual to help understand the importance of this issue.

In conclusion, whether you do your own landscaping or hire a professional **YOU ARE RESPONSIBLE FOR PROPER DRAINAGE.** Please see the sketches above for some basic do’s and don’ts.

F. Equipment Location

When establishing the placement of your pool equipment, several things should be considered. Ideally, the equipment should be near the pool (within 50’) and within two or three feet (plus or minus), elevation wise, in relationship to the pool water operating level. If your ideal location is more than 50’ or you are lifting the water more than 3’ or 4’ or a combination of both, then you may need a change order for a different pump that can handle the more stringent requirements.

Some other considerations are the feasibility and proximity of getting electric and a natural gas line (if needed) to the equipment location. Gas heaters cannot be placed inside of 4' of windows, under wood decks, or near vents. No equipment can be placed in front of your electrical meter.

If you are placing your equipment at the fence line outside of the pool area it must be 4' away from the fence so that someone cannot use it to climb over the fence to access the pool per, N.Y. State code.

Consider how will it look in your yard and whether the location provides good access for you to operate your system, and for us to service it, if necessary. Noise is typically not a huge issue but should be considered and would be dependent on the type of pump and heater you have purchased. Gas heaters and the optional variable speed pumps are extremely quiet. Heat pumps are like a whole house air conditioner in noise level.

Most often, the equipment location will end up on the side or back of the house against the foundation for good access to mechanicals and ease to get to. If you are considering locating equipment in a shed or pool house, that will require precise coordination and can add to the scope and expense of the work involved. Gas heaters inside an enclosure require additional venting and makeup air. Heat pumps should never be enclosed.

It is not recommended to put the equipment right next to the pool unless there is no other practical choice- mainly for sound and aesthetics. Performance is not a factor. We will work with you to establish a location when the pool is laid out.

G. Change Orders

We understand that you are making a substantial investment in your back yard and that sometimes you may want to, or even need to, change something along the way from the original contract. Many changes can be relatively simple to make prior to the actual start date, assuming it is a product or service that is readily available.

John Nesbitt, or one of our other site managers will typically meet with you one more time just prior to the actual dig date to re-layout the pool and go over any additional information or changes. Major changes, such as re-designing the shape or size of your pool, will likely cause a delay. Minor changes such as altering your pool equipment or adding a feature may not cause a delay, however **any changes at all must be made through your salesperson and be a documented change order paid in full (if additional),** prior to excavation so that the proper equipment/material will be delivered. **The site managers do not do change orders,** they must go through your salesperson.

Please understand that the entire pool and all pool equipment (pump, heater filter, lights, rail goods, accessories etc.) are delivered on or before the planned excavation day. Changes after this can be problematic.

Excavation and Construction

A. General Timeline

Now that we have a permit and a plan, we can zero in on the start date and build!

Generally, speaking your pool should take approximately 8 to 10 weeks from the 1st shovel in the ground to completion. The key word here is “generally”, as there are many factors that can affect this timeline. Sometimes, we may even start your pool earlier than expected, however that does not mean it will necessarily be completed earlier than expected.

The #1 factor is weather. While many aspects of the construction can be done in adverse weather conditions, some simply cannot. The main one here is the pouring of your concrete decks. For example, 2016 was a banner year, weather wise, for construction due to lack of rain. Our masons could respond as fast as we could schedule them. Masons were happy, customers were happy, we all were happy. That is not always the norm. Wet seasons can have a dramatic impact on productivity and scheduling. Sometimes it is so wet that you can’t even get trucks or material in the backyard. It is frustrating to all parties involved if things get backed up, so let’s hope for dry weather and please have patience if it is not.

Cantilever edge vs. aluminum coping can have an impact too, because the concrete coping must be done before the liner goes in whereas with aluminum, we can install the liner before the concrete decks.

See the following sections for a few more details on the construction procedure.

B. Excavation, Structure, and Backfill

This initial phase usually happens very quickly and can be quite impressive to witness. In most cases the pool site will be excavated by a small crew on the first day and followed up the next day with a larger crew that will assemble the pool structure and pour the concrete “collar” and the concrete bottom, if time and weather allows. It is common for the concrete bottom to develop some hairline “shrink cracks” in it as it cures. This is normal as we cannot cut or tool expansion joints like you would do with a sidewalk. After the bottom the next crew will show up to backfill and do the underground plumbing. There may be several days in between this step, depending on where the backfill crews are on scheduling.

Many customers can be alarmed by how much of their yard is affected during construction. It would be unrealistic to expect only the footprint of the pool and decks to be disturbed, but unless you have experience in construction, the process may seem a little overbearing at first until it starts going back together.



In this case, we put the bottom in after “plumb and backfill”.



Generally, your yard will go from how it was to a structure, backfilled, plumbed and rough graded within one week. once it is backfilled, we will set up a temporary fence and you will be asked to set up “soaker hoses” to help settle the ground up near the pool.

C. Soaker Hose and Settling Time

Once the backfill is complete we ask your cooperation in a very important step which is to set up some soaker hoses and soak the ground around the pool. We have found this to be by far the best way to settle and compact the backfilled ground around your pool. The ground will need to soak/settle a minimum of 10 days or more depending on the soil. Some soils will compact much easier and faster than others, but most of the soil around here is clay which is more difficult and may require more time.

You will receive an e-mail on when and how to set up the soaker hoses on or around the time the backfill is completed. This will not take a lot of time or expense on your part (North Eastern does not supply soaker hoses, but they are available at stores such as Home Depot, Lowe's, Walmart, etc.), but you will see the results and why this is so important. This is not a step that we could "practically" do ourselves for obvious reasons, so thank you in advance for your cooperation.

During this time, we may be completing some other tasks such as installing coping/bead receiver, above ground plumbing or even pre-prepping your pool bottom in anticipation of the liner install. Please be patient as we may not be on site and understand that if we are not on site that we haven't forgot about you.

This time period to settle/compact the ground between backfill and the installation of your concrete decks is extremely important. At some point during this 1-3 week period you can expect to hear from Debbie or Alyssa as they will be assigning a mason and electrician to you, as well as other correspondence as needed.



In this picture, you can see the soaker hoses at work, compacting and settling the ground around the pool after the backfill is complete.



This is a picture of a local builder's pool who was notorious for just dumping in the backfill and pouring the decks right after. The customer would be pleased at first on the speed but the results are extreme settling and hollows under the decks. This can lead to a myriad of other issues.

D. Mason/Concrete Decks

Although it is not necessary to have an exact plan for your patio prior to excavation, it is best to have an idea as soon as possible so that lingering decisions do not hold up your backyard transformation. We work with several different masons and assign projects to them based on their specialties and the homeowner's requirements, so the sooner you have an idea of what you'd like to do for concrete, the sooner we will be able to assign your project to a mason.

Many customers want to have a mason assigned immediately and from there, come up with ideas about what they might like for their project. In our experience, we have found it helpful to have a rough idea of what you are looking for so that we can assign a mason that will be best suited for your project.

If you need to get an idea of the square footage you may want for concrete, we recommend painting out an area on your lawn. Then put your chairs, tables, storage containers, toys, etc. inside the painted area to see if you are giving yourself enough room.

You will also want to consider the different types of concrete finishes below, which will also impact which mason is best suited for your job.

Let's start by examining what types of concrete decks are available

- **Broom finish:** Generally speaking, all contracts are written with 3' of "broom finish" concrete being included in the contract. It is by far the most popular choice. As it implies, it is simply concrete in its natural color finished with a fine broom (like a sidewalk) as opposed of being troweled smooth like a basement floor. It offers excellent traction,

looks good and is the most affordable of the options.



Here we have a standard “broom finish” concrete deck and partial paver combo. There needs to be a “sub-deck” under the pavers a min. of 3’ out from the pool wall.

- **“Stampcrete”**: This is a system that uses, you guessed it, stamps to emboss a pattern on to the concrete before it cures. There are several patterns and colors available from simulated slate to brick. The pros are that most people love the look. The cons are price, potentially very slippery, and maintenance in the clear coat. It can also be more of a challenge to obtain a mason that is a master of this process.



- **Colored concrete:** To color concrete, a coloring agent is added to the mix on site while it is in the truck. It is not a “topical” added after it is finished. The pros are it can add a distinctive look to your project at a moderate increase in cost. The cons are the expectations of the end color, “splotching” issues, cost increase and if a repair is needed, matching the color will be difficult if not impossible. **While this can be an attractive looking option, North Eastern Pools does NOT endorse colored concrete and will not be responsible for any issues related to this process.**

We have heard some positive feedback from customers that have stained their concrete decks after the install with a “topical” product. This may be a viable alternative; however, we do not have a particular product or company to endorse at this time.



Here is a good example of pavers up to a colored concrete cantilever deck.

- **Exposed aggregate:** This is a process where a pre-picked stone or pebble matrix is broadcast and troweled into the top of the wet concrete and then as the concrete cures, the top concrete, or “fat”, is washed away with a garden hose, exposing the matrix underneath. Once it is cured it will need to be sealed. The pros are a unique and durable finish. The cons are increased price, can be rough on the feet, and finding a mason that has this less common process in their arsenal.

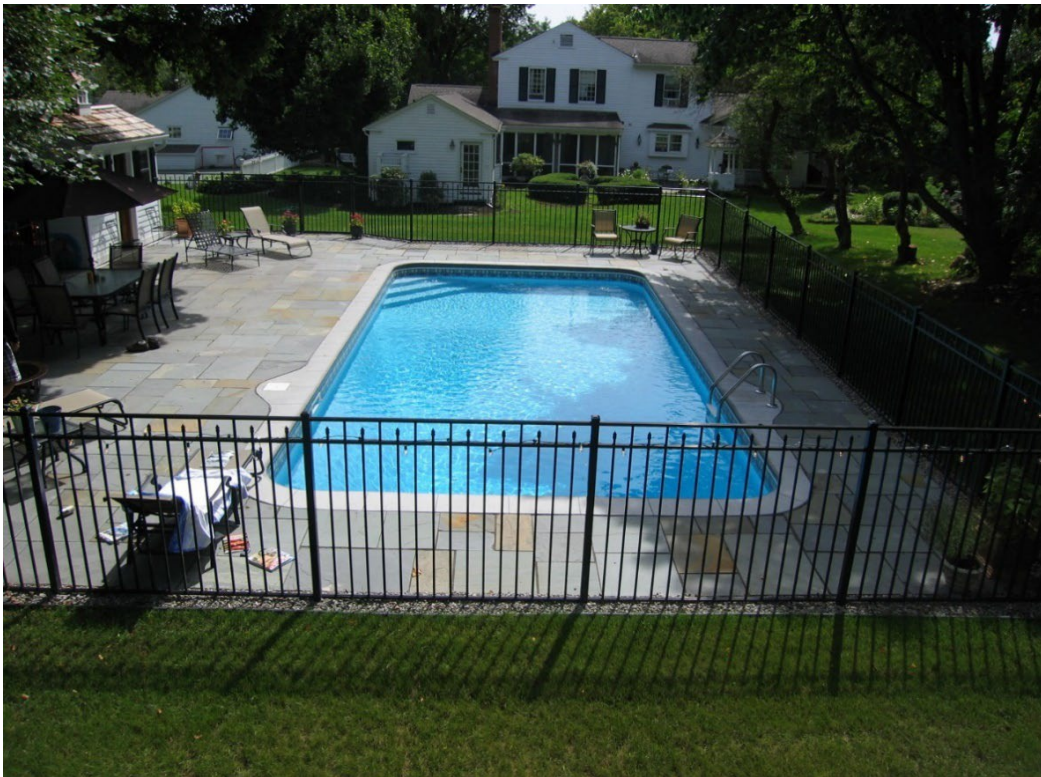


Here is an example of exposed aggregate with a brick design combo

- **Sub-deck:** This is where a concrete deck is poured at a lower height than the finished deck in anticipation of a paver or stone to be placed on top. Generally, sub-decks are only poured in the first 3' or 4' around the pool. Most people who are doing pavers will also want a safety cover for their winter cover and a sub-deck is needed here to properly anchor the cover as pavers alone would not be sufficient. On occasion, a "bond beam" (as we call it) may be incorporated into the sub-deck for a custom look. An example of this is in our showroom where we have a 1' concrete perimeter "bond beam" with pavers that but up to that. The pavers sit on top of the subdeck.



Here we are installing a new liner in one of our showroom pools. This pool has a 1' "bond beam" with a 3' subdeck. The pavers are installed over the top of the sub-deck. Note the "blower" and the tube behind the liner. The blower creates a strong vacuum to hold the liner in place while it is being filled.



Here is a nice example of an 18" bond beam with natural slate pavers.

The earlier you can determine what you would like to have done with your patio, the sooner we are able to assign a mason to your project. If you would like, you can go on our website, www.385swim.com, to get some ideas by looking at our galleries.

If you are doing additional concrete beyond the 3 ft. included in your contract, the mason that we've assigned to your project will meet with you beforehand to discuss your requirements and provide you with a quote for the additional work you've requested. Once you've determined how much additional concrete you'll be doing, you will sign a separate contract with the mason for the additional work and make the payment for the additional work directly to them.

If your plans for concrete change drastically after you've already completed a Mason Information Sheet with your salesperson, please let us know. This may have an affect on the mason we assign to your project, and in some circumstances we may need to re-assign the project to one of our other contractors who would be better suited for your new requirements.

If you are using your own mason, please note THEY are responsible for placing the cups for any ladder/rail goods you will be putting on your pool! This is an essential step in pouring the concrete around the pool and can create issues down the road if not done while they are pouring the decks. This is something our masons are accustomed to and will do automatically if you're using one of ours, but others may not be aware.

E. Electrical Work

Most of you will have a referral for the electrical work. We will assign you one of the electricians we work with on or around the start of the actual construction. **This assignment will come via email.**

Your electrician will likely come out to your site a few different times, during different stages of your project.

Our electricians make their own appointments, but our office does communicate with them regularly and update them on the progress of each job as well.

Your electrician will contact you and arrange to meet to discuss your needs and survey the site, and at this time it can be determined if there are any factors, or extras you may want that will affect the cost.

Generally, if you are using one of our electricians, the process will go as follows:

Prior to the concrete decks being poured, your electrician will bond the pool. He may also wire your pool equipment at this time, but it is not uncommon for him to make another appointment to complete the wiring of the equipment once the liner has been installed. This is because the electrician cannot finish his work until the pool light is installed (this occurs at the same time as the liner installation), so he may come back at that time to complete the remaining electrical work aside from bonding during this second trip.

If you are using your own electrician instead of one recommended by North Eastern, please note that you/your electrician are responsible for ALL electrical work, including the

installation of conduit prior to the backfill, bonding the pool/lights/rail goods and sockets, the complete wiring of any and all pool equipment, and any other electrical needs you may have.

Factors or extras that can affect cost

- Location of the pool equipment away from the house requiring trenching and additional wiring. (I.E. *equipment out by, or in a shed*)
- Inadequate room in the panel box requiring the need for a sub-panel or upgraded service.
- A difficulty factor causing additional work in running the service from the panel to the equipment such as a finished basement or slab on grade that may require the electrician to trench around the house as opposed to running through it.
- If there is not an existing outlet within 20' of the pool, then one would need to be added.
- Other electrical needs such as power to a shed or adding additional convenience outlets.

F. Liner Installation

If you have cantilever decks, you can expect that your liner will most likely be installed **after** the concrete decks are poured. For jobs with coping, the liner may be installed prior to the decks being poured, depending on when the liner arrives from the manufacturer.

Your liner is usually installed by a 2-man crew. They will start by prepping the bottom. This entails grinding or “stoning” down rough spots, patching any minor defects and a thorough cleaning. Then they will hang the liner. Once they have it in the proper position, they will hook up a couple of blowers that will suck the air out from behind the liner creating a vacuum to hold it into position while it fills with water. They will “cut in” the steps if they are the conventional pre-made type and then start filling the pool with water. They will put a tape mark on the liner, usually about 3” to 6” up on the shallow end wall for you to fill to.

We require your help here again. As most of you are on public water, your pool will be filling with your garden hose(s). We will need you to shut the water off when it gets to the tape mark. It is very important that it doesn't overflow, and it is equally important to fill it in a timely manner especially if any major rains are coming. It can be very helpful to run 2 hoses, even from the same house. It is also mandatory for the blowers to stay on the entire time the pool is filling to the mark (if they shut off beforehand for any reason, shut the water off and contact Debbie).

Once you have reached the tape mark, please unplug the blowers and shut off the water and then call Debbie or Alyssa so they can arrange for someone to go back and remove the blowers and finish any “cut in” work. If you have conventional plastic steps, we will probably be able to have you fill it from there all the way up to operating level. If you have vinyl over concrete steps or a bench, we will give you a new tape mark to start filling to again, so we can work the liner as it fills. We may have to do this a couple of times.

If you are on a well and are trucking water in, please let Debbie or Alyssa know this when they first contact you so proper arrangements can be made.

- a. It is important to understand that your vinyl liner is intentionally made slightly smaller than the pool to allow it to stretch into place and minimize the potential

for wrinkles on the floor and walls. This means that where 90 deg corners exist, (e.g. where pool walls meet the shallow end floor, where step treads meet step risers, and where step ends meet the pool wall, etc.) it is normal to see a few inches of "stretch" in the liner. In most cases, this stretch will diminish slightly with water-weight and time, but it is quite standard for some residual "stretch" to remain for the life of the liner, and does not affect the vinyl's integrity. Additionally, the presence of seams in your liner is a necessary part of your liner's construction. Visibility of these seams can vary from pattern to pattern, but every liner has them. The seams, themselves, are functional, and do not always "hit" perfectly on the contours of your pool bottom or steps. Often, they stray slightly on features like concrete steps or benches and often minute wrinkles will exist permanently on the corners of steps where they meet the pool wall. Our liner manufacturers work with us and evolve with us to ensure the best fitting product possible and are, in our experience, the best in the nation! Additionally, at North Eastern Pools, we use laser measurement and we custom CAD design every one of our liners to bring our fit and finish exclusively far above industry standards and closer to "perfection" than ever before.

Here you can see the 2 blowers and the blower tubes behind the liner. They vacuum the air out from behind the liner to hold it in place while the pool is filled to the first tape mark. This is usually about 4" to 6" up in the shallow end.

Please do not overfill.



Here you can see the red tape mark that the installers put on the liner for you to fill too. The blowers must remain on until the water reaches the mark. At that time you can unplug the blowers, shut off the water and call Deb at the office. Also, you can see here, the results of the customer using the soaker hose to settle the backfill around the pool.



Once your pool is full:

Regardless of where your project is at, two things that will happen after the liner installation are:

1. **Completion of electrical work** – during the liner installation, we also install the pool light. So, once your liner has been installed, your electrician can make an appointment with you to come back and finish any remaining electrical work (or if you are using your own electrician, you should reach out to them to schedule the completion of their work at this time). All that is necessary prior to pouring concrete is the bonding of the pool, so there may still be wiring left to complete at this time.
 - a. **See section E above for more information on electrical work**
2. **Chemical “Start Up” Appointment** – once your liner has been installed, our retail department will be reaching out to you to schedule your first water test, also known as our “Chemical Start Up” appointment.
 - a. **See the “Start Up and Operations” section for more information on this appointment**

Start Up and Operations/Project Completion

A. In-Store Chemical Orientation (Chemical Start-Up)

On or around the time your pool becomes operational an appointment will be scheduled for you to come in for an “In store chemical orientation,” or Chemical Start-UP, with one of our retail staff. Please call ahead of time to schedule this. Do not simply show up at the store for this as we need time to prepare for the start-up and make sure a qualified employee is available.

You will need to bring along a water sample from your pool. We will test your water and you will receive a startup chemical package and specific instructions on your initial treatment. This usually takes around 30 to 45 minutes in the store. You will also receive an “Owner’s Manual” with a host of valuable information on how to operate your pool.

To get the best out of your “onsite operations and training” that will be scheduled later with one of our techs, you should read and understand this manual prior to our arrival. If you would like to obtain a manual sooner to have more time to review it, please let us know so we can arrange that. This is encouraged. We can also e- mail it to you at any time.

We also offer in store pool school to our customers where we review water chemistry, vacuuming pools, how to backwash, clean out your skimmer and pump baskets etc. Please check our website for dates and times the classes are available. This is also a great refresher course for end of season builds.

B. Punch List and Onsite Operations and Training

Once your liner has been installed and your concrete work around the pool is finished, we will schedule what we call our “Final Punch List”. As it implies, we will be taking care of everything to satisfy our contractual agreement and close out the project.

This includes cleaning the pool, installing your pool accessories (ladder, rails, float line, pool alarm, etc.), and showing you how to use your new pool equipment. We generally do this at the same time as the final punch list, but in some cases when the homeowner is not available at the time of the punch list, we will schedule to come back and complete this training at another, more convenient, time.

Either way, at this time one of our techs will meet with you on site to show you the basics on how to operate your pool. They will teach you things like how to vacuum your pool, how to backwash, and basic operations.

Any hauling of dirt or final machine grading will also be completed around this time as well, as weather permits.

As mentioned above, you will be way ahead of the game if you read and understand the Operator’s Manual prior to this appointment. It is also recommended to take the manual out with you during your onsite operations so that you can record your “start up pressure” and have something to take notes in if necessary.

C. Fencing

Of course, your pool area/yard will need to be fenced for safety and need to comply with N.Y. State and local codes. If your fence ties into your house or garage, you will need to have an approved alarm on any door(s) that exit into the pool area.

We provide a temporary fence during the construction phase, but a permanent fence is required for you to close out the permit and receive a “certificate of occupancy”. Once your temporary fence is no longer needed please contact Alyssa (ext. 402) so she can arrange for it to be picked up and the refund of your \$200.00 deposit.

Please note that YOU as a homeowner are responsible for maintaining the integrity of your temporary fence.

Fence Installation Guidelines:

The best time for the fence installation is after the concrete decks are poured and after North Eastern has completed the rough grade and compacted the soil around the pool. The fence is installed prior to loose soil or topsoil, grass seed, sod, plants, mulch, decorative stone, and gravel are added. It is also installed before the access path to the yard is repaired. One exception is if you are having a patio, deck, or pool house being installed. This is because you do not want to limit your access to the yard.

We recommend installing the fence before any finish landscaping because in order to install afterwards your fence contractor would need to hand dig holes for the posts. This results in a smaller diameter hole that is not dug below the frost line. The hole uses less concrete and the result is a subpar installation. This can also increase costs due to removal or the dirt and possible damage to the finish landscaping.

Here is a list of potential areas of concern;

Pavers: The fence should stay at least 12” away from the concrete decks and 18” away from pavers. If you try to dig next to pavers the gravel base falls into the hole undermining the patio which will cause settling. If you are having the fence go through the pavers or concrete, you will need to have 6” plastic soni-tubes installed before the gravel base is installed. Sometimes your fence contractor can design a double gate to span the patio or concrete so the soni-tubes are not necessary. Any post that is closer than 6” to a patio will also need soni-tubes to be installed before the patio.

Retaining Walls: If you are putting the fence on the low side of the retaining wall you will need to keep it at least 12” away so you do not create a foothold or disturb the gravel base. If you are putting the fence on the high side of the retaining wall you must stay back far enough so that the geo-mesh, gravel, and drainage tubes are not disturbed. If you want the fence installed close to a retaining wall soni-tubes will need to be put in after the wall is built and before it is backfilled. We do not recommend attaching fences to the tops of retaining walls.

Design Concerns: Make sure the fence does not cross over or run along the main power feed to your home. Keep the fence away from all underground utilities such as sewer, septic, drainage, and gas lines. Fencing cannot be installed in any right of ways, easements, or DEC

buffer zones unless the customer obtains the proper permits or variances. Most property survey maps will show if you have any restrictions.

Avoid installing pool utilities (plumbing, gas lines, electrical, drainage lines) next to where you want to put the fence. If the fence needs to be installed near any of these lines the customer should take pictures and measurements before they are backfilled. This will help your fence contractor determine their location and avoid any damage.

Fences installed closer than five feet to the water's edge must be bonded. It is the electrician's responsibility to leave a bonding wire exposed so we can attach it to the fence. The electrician should be notified of this prior to the bonding of the pool.

Fences installed near or on the property line will need a yard survey and the property lines marked.

When using your house or garage as a barrier you will need to install an alarm on all doors that access the pool. Door alarms can be purchased at North Eastern. When using your deck as a barrier make sure that it passes new pool barrier codes.

D. Completion/Certificate of Occupancy (C of O)

The technical completion of your pool is when you can obtain a Certificate of Occupancy from the building department that the permit was issued from. A Certificate of Occupancy means that your pool, **including your permanent fence or enclosure** meets N.Y.S. and local codes. It is for this reason that you, the customer, will need to call the town to arrange for a final on-site inspection once all the criteria have been met. See the check list below.

At this time, you will need to call the town to arrange for a building inspector to meet you on site for your final inspection to obtain a C of O. The phone # to call will be on your permit.

Final inspection check list

- ☐ Pool is complete and up and running.
- ☐ Permanent decks are complete with pool alarm installed and operational.
- ☐ Electrical work has been inspected and passed – proof of inspection sticker should be located inside the timer or EZ touch door. If the town is looking for proof of inspection from the inspecting agency, please contact the electrician who did the work.
- ☐ Final grade and/or rough landscape has been established.
- ☐ Permanent fence or enclosure with door alarm(s) if applicable.

Please contact your salesperson or Debbie with any questions.

E. Winter Covers, Safety Covers, and Closing Your Pool

With the purchase of your pool, a complementary closing is typically included in your contract. **Your contract will act as a voucher for this service when the closing is scheduled, call our service**

department x401 to schedule your closing. Full payment of the contract is still due **when the pool itself is completed**. For example, if we finish your pool in July, the balance in full is due at that time even though your cover has not been delivered and the complimentary closing has not yet been performed. All balances must be paid in full prior to scheduling your closing.

Please note **we do NOT offer on-site training for pool openings and/or closings** due to the damage that can occur to your pool if it is not winterized correctly. We recommend hiring a professional for these services in the future and do not include any tutorials on opening/closing your pool in our services. If you have general questions on maintaining your pool, we do offer free Pool Schools in our retail store where you may ask questions and learn more about caring for your pool. Please visit 385swim.com to learn more.

When the weather forecast is predicting that we will be experiencing freezing temperatures; It is very important that you leave your pump running 24/7 during these times, so that the water stays circulating within the system. If you have any water features such as deck jets, water falls, slides etc. these need to be running also. We recommend leaving your pump/system and any water features running 24 hours a day up until it is time to close your pool.

Regardless of what type of cover you have coming, we require a minimum of 30 days for your concrete to cure prior to covering. If the decks are poured late in the season just prior to winter, it may mean we do not even cover your pool at all. It would still be winterized, and we would also come back in the spring and vacuum and clean as necessary.

If you purchased your pool with a standard winter cover and water tubes: We will bring and install the cover and tubes at the time of closing.

If you have purchased a standard safety cover with your pool: A “standard safety cover” installation would mean that you have 3’ or more of unobstructed concrete deck to install the cover. Rail goods are removable *and* do not require a modification or “cutout”. Most diving board bases are far enough back that they do not require a cutout (18” or more from waters edge).

Below are some examples that would require additional modifications and cost to your cover that would need to be measured and planned for prior to ordering your cover.

- Permanent landscape features such as planters or waterfalls inside of 3’ from water’s edge may require a cutout(s) and possible cable strapping depending on the length of the cutout.
- Pavers inside of 3’ over a “sub deck” will require paver rods, also at an additional cost. Paver rods are an aluminum tube that is installed through the paver into the subdeck so the pavers do not come loose.
- Reduced deck scenario (less than 3’ from water’s edge) would require “reduced deck mount” strapping system or possible “D rings” depending on the length and location of reduced deck.

Please consult John Nesbitt or your salesperson with any concerns. Once a cover is made, altering it would be very expensive as it would have to be sent back to the

factory. You are responsible to inform your salesperson if anything changes that would prohibit a standard cover installation prior to order. There would need to be a change order to proceed. Also, it is our policy that no covers will be ordered until full payment has been received on any completed pool. It will be delivered and installed at the time of your complimentary closing, OR if scheduling allows our service department will contact you to coordinate the installation during the pool season.

Also please note, chipping of concrete surface when drilling for anchors is something that often occurs and is deemed unavoidable. We install anchor flanges to help mask the chipping, but it is not unusual to have chipping occur beyond the flange. North Eastern Pools is not responsible when this occurs.

Congratulations on your beautiful new backyard! Please refer to our “Owner’s Manual”, which you’ll receive at your Chemical Start Up Appointment (or email us at newingrounds@385swim.com to request early), for more information on maintaining your pool for many years to come 