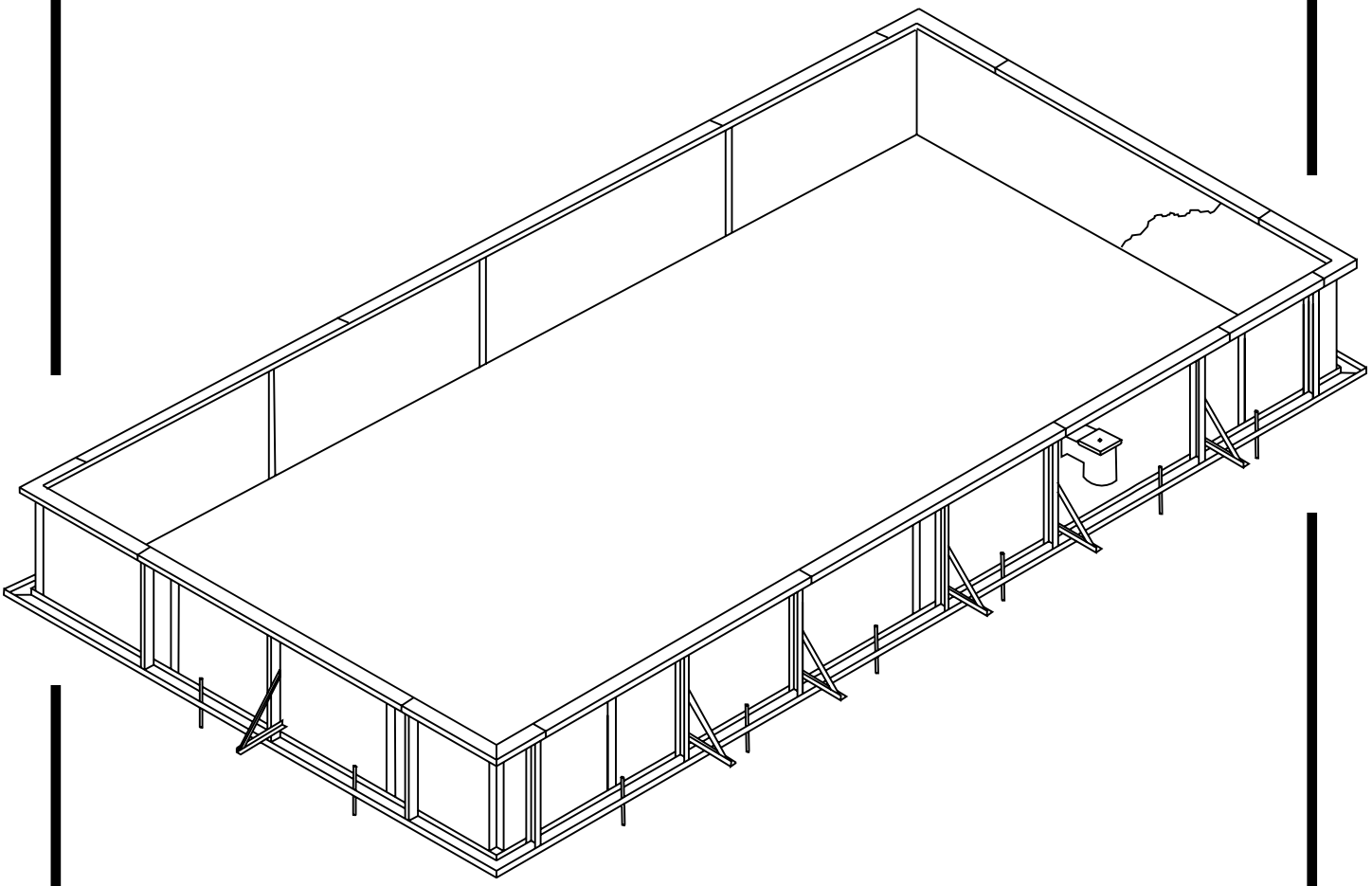
Installation Manual

Insulated Wall Panel Plunge Pools



latham

The Pool Company™

IMPORTANT SAFETY INFORMATION

Enclosed in the liner box is the safety envelope. The safety stickers must be installed as per instructions. Failure to properly install warning labels will void warranty. Alert all visitors and family of the risks associated with jumping and/or diving and point out all warning labels supplied. Failure to mount these safety labels may subject you to substantial liability in case of injury.

Your pool is designed for years of pleasurable, safe family fun. But when used incorrectly, a swimming pool can be dangerous. To insure your pool is used safely you must observe the following safety precautions:

1. Do not dive, do not jump, no rough play, no running or pushing.
2. Be sure to install all safety labels provided with your pool according to the safety instructions.
3. Keep a 50' safety rope with a flotation buoy with an outside diameter of 15" accessible in a prominent area by your pool.
4. Post near all entrances to the pool area a list of telephone numbers for the following:
   a. Local police
   b. Local fire department
   c. Local rescue unit
   d. Local ambulance service
   e. Local hospital
   f. 911 emergency number, if available
5. Provide fencing or an enclosure which is independent of the house as a closure around the entire pool area. The fencing must be made of durable material, a minimum of 4' high from ground level and with closures with self-latching locks to make the pool inaccessible to toddlers and uninvited guests. Make sure the gate is always closed. Be sure to follow local building code requirements for load capacity and fencing if using an aftermarket or home built deck.
6. Check with your local town or municipality in regard to obtaining a building permit and/or an electrical permit. The installer shall follow the regulations for set backs, barriers, devices and other conditions.
7. All electrical outlet connections should be a minimum of 5' from the outside perimeter of the wall of the pool. From 5'-10' there should be either a fixed connection (outlet box) or twist lock connection with a GFCI. Connect power cords to a 3-wire grounding-type outlet only.
8. Severe electrical shock could result if you install your pump or filter on a deck. They could fall into the water causing severe shock or electrocution. Do not install on a deck or other surface at, above or slightly below the top ledge of the pool, within 5 feet of pool water edge.
9. Do not sit, stand or climb on the pump and filter or any part of the pool structure. Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as a means of access to the pool by young children.
10. Never drink alcoholic beverages or use any intoxicants which could hinder your judgment and reflexes.
11. Never use the pool alone. All children must be supervised continuously.
12. Do not use pool if bottom is not clearly visible. At night, sufficient lighting must be available. It is the pool owners' sole responsibility to provide adequate lighting for the pool bottom, safety signs and walkways, which exceeds minimum standards of the IES of North America.
13. Be sure that all toys, chairs and tables or similar objects that a young child could climb on be at least 4' from the pool.
14. Do not use pool during electrical or rain storms.
15. See available Association of Spa and Pool Professionals (APSP) publications for more tips on pool safety.

TOOLS and MATERIALS NEEDED

Tape measure, 100ft.

Orange Marking Spray Paint

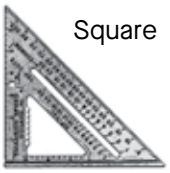
Metal File

Utility Knife

Transit/Laser Level

Hose with spray nozzle

Square



String

Duct Tape

Level

Cloth rag

Rubber Mallet

Cooking Spray

Step Drill Bit

Long handled pointed shovel

Short handle square shovel

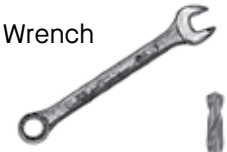
Socket Set

Hacksaw

Pick or Mattock

Power Drill

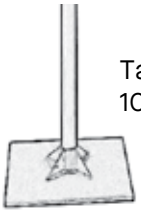
9/16” Open End Wrench



1/4” Hex nut driver bit

Screwdrivers, Flathead and Phillips

7/16” and 1/8” Drill bits



Tamper, 10 or 12 in. Square

14” Channel Locks

Extension Cord

Shop Vac

Pool trowel

Rake

PVC Pipe Cutter

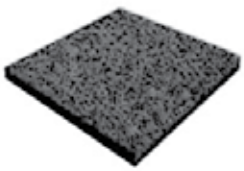
Foam Sealant (Great Stuff)

Masonry Sand

Soft bristle broom

Hand Broom

2x4



2” Patio Block

Wheelbarrow

INTRODUCTION

The Installation of the Latham Insulated Panel Inground pool is not hard, nor complicated. Although installation conditions might differ from this guide, it is important to consult with the manufacturer before making any changes that might disturb the integrity of the pool. Failure to follow these instructions will void all warranties. Read and follow all manufacturers' instructions including accessories such as pumps, filters, skimmers, etc. prior to starting.

IMPORTANT: A minimum of 26" of the pool wall must be below the ground

Before you start, check your packing list to confirm that you have the correct number of parts and components. The manufacturer reserves the right to revise, change or modify construction of its pools. See packing list for pool components included for your pool. If there are any missing or damaged components, please contact your retailer for replacement.

While all Latham Insulated Panel pools are designed to meet or exceed industry recommended safety standards *(ANSI/ APSP-4 and 5 American National Standards for Residential Swimming Pools)*, special attention must be paid to all installation procedures that the installer performs and controls. Spend time to ensure that the entire pool framework is **perfectly level and square**. Unlevel pools place extreme pressures on the pool walls. Be sure to follow these instructions. Improperly installed pools can rupture, allowing thousands of gallons of water to rush out causing extensive property damage and injury to anyone in its path. As with any major home project, a homeowner is responsible for following all local laws, ordinances and codes. Electrical grounding of swimming pool is required. National and local codes must be followed. A checklist is provided below as a guide for these considerations.

✔	HOMEOWNER CHECKLIST
	Obtain building permit if required.
	Local building and zoning requirements
	Electrical and Grounding requirements
	Have Ground Tested for Stray Electricity
	Proper Backfill and Drainage
	Fencing requirements
	Backwash (waste water) requirements
	Check availability of utilities.
	Call before you dig (www.digsafe.com)
	If pool has steps, read the step manual.
	Disposal of excavation materials

With proper installation, care and maintenance, this Inground Residential Swimming Pool from Latham Pools will provide a lifetime of fun and relaxation for the homeowner.

Latham Insulated Panel Pools offers a non-prorated, lifetime guarantee on the entire pool against manufacturing defects. Walls, coping, structural supports, and channels are guaranteed against defects due to faulty workmanship or manufacturing for as long as you own your home. Compare our warranty with any other pool manufactured. Engineering, innovation and efficiency make the difference. It's simply brilliant.

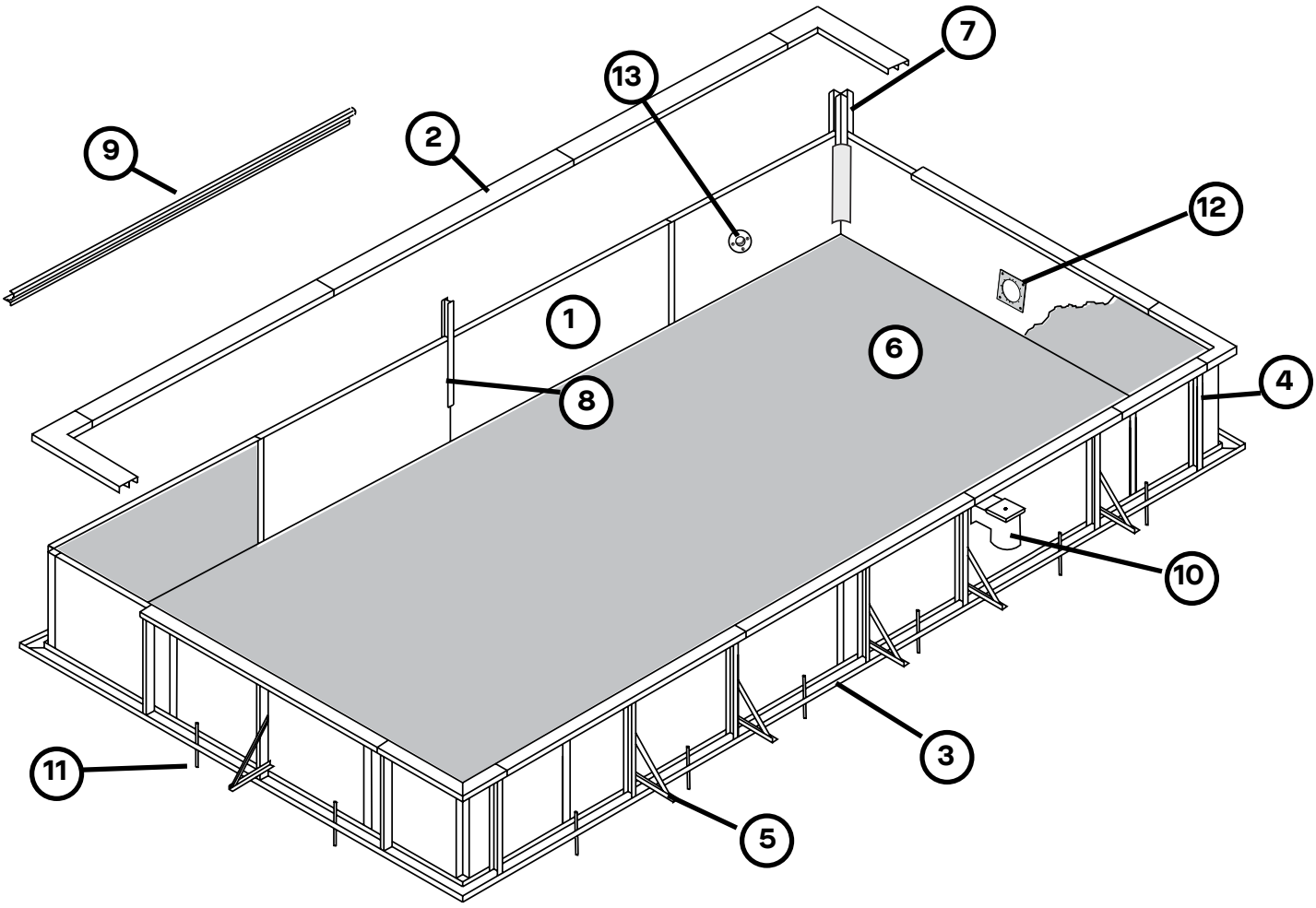
IMPORTANT: BEFORE YOU BEGIN

The selection and preparation of the pool site is your responsibility. The manufacturer can only suggest the proper techniques, indicate the important considerations and emphasize the precautions and cannot be held responsible for damages to your pool that may result from failure to carefully follow all pool specifications.

All Latham Insulated Panel Pool components are engineered to provide a precise fit. It is very important to handle all components with care. Prior to assembly, all pool components should be free of sand, mud, dirt and debris of any kind.

We recommend a small broom or shop-vac to maintain a clean track system throughout the installation process. In addition we recommend a damp cloth be available in the event that any dirt or debris finds its way to the panel surface.

STRAIGHT PANEL POOL COMPONENTS WITH 90° CORNERS

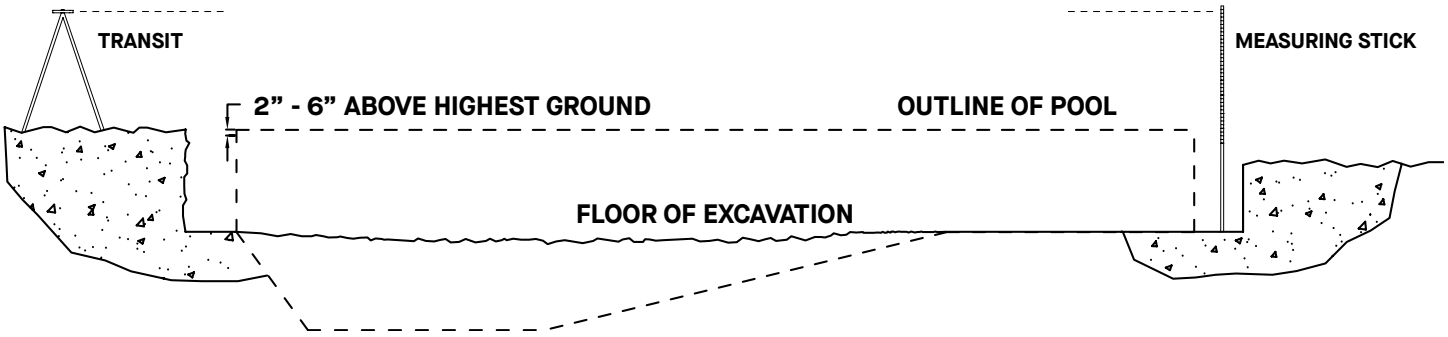


#	COMPONENT
1	Straight Wall Panel - Form straight sides of pool.
2	Top Channel - Support top of straight walls and provide attachment for coping.
3	Bottom Channel - Provide base and structural support for straight walls.
4	Backbraces - Connect top & bottom channels together.
5	A-Frames - Fasten to backbraces & imbedded in concrete for stability.
6	Liner - Fits inside of pool to form a watertight skin.
7	Corner Connector - Used at corner joints to join walls together.
8	Panel Connector - Join straight panels together.
9	Concrete Receptor Coping (optional) - Secures liner & gives finished appearance.
10	Skimmer Assembly
11	15” Rebar - to stabilize bottom channel
12	Light Niche Mounting Plate
13	Return Fitting

LEVELING THE EXCAVATION

Layout the pool outline on the ground relative to ground obstacles and structures near by. Mark the overdig for excavation 24" outside the pool outline. The overdig is soil or dirt to be removed for access for the pool supports, concrete collar, and work room outside the pool walls. Mark location for skimmer(s), inlets, step, light and any other accessories to be installed. Check for buried or overhead obstacles, electricity, plumbing, septic lines etc.

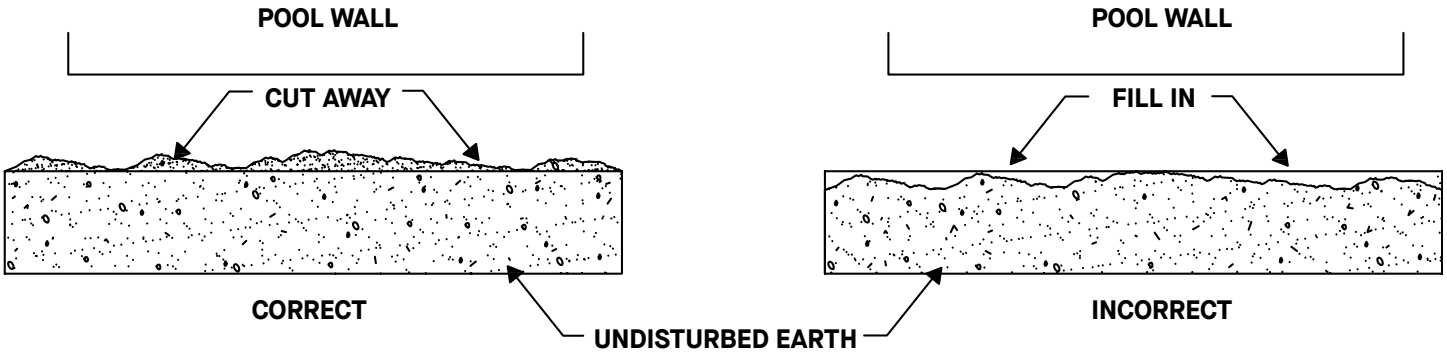
Note: An 8' step will need an extra 6' x 10' area to be excavated. Please see the dig specifications for location options for the steps.



Determine the height of pool relative to ground and surrounding structures. Pool should be set at height (Benchmark) so that rain and splash will drain away from the pool (1" for every 4'). The benchmark must include wall height, coping and added decking.

A sturdier pool will result when the pool rests on undisturbed earth. It is better to have to remove an inch or two by hand than to have to build up after the excavation went too deep. Any voids beneath the wall panels caused by large rock removal, etc., must be filled and properly compacted.

The dig specification drawings indicate the wall height and finish depth inside and deep end of a pool. An 8' hopper excavation is a minimum of 8' 2". A 42" wall outside will be 40" inside under the liner finish depth.



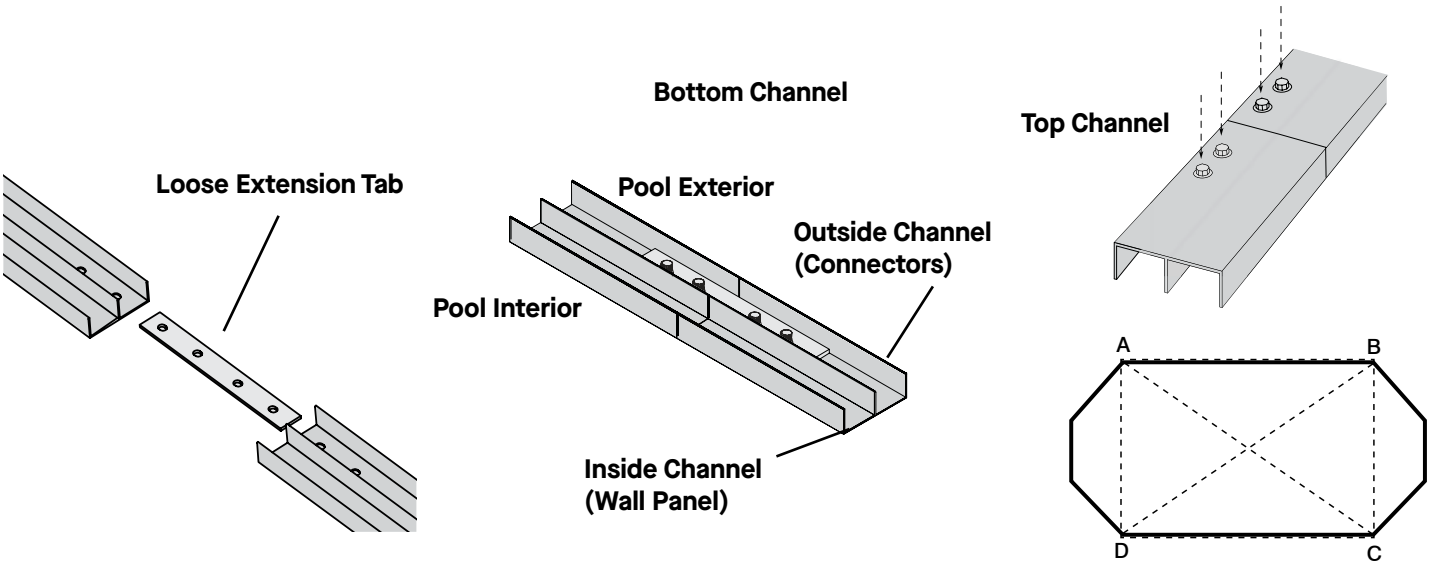
Note: if installing steps in a freeform pool (no straight walls), begin the panel installation at both sides of the step and continue assembly from there.

CHANNEL ASSEMBLY

Straight wall pools utilize aluminum channel to create a framework for all remaining assembly.

To assemble, align the holes on one side of the extension tab over holes in channel track. Insert 3/8" bolts with 9/16" head with washers from beneath the bottom track using open end wrench. Continue by aligning the next bottom channel piece with the holes on the other side of the tab. Again insert included bolts and attach with head and washers. DO NOT OVERTIGHTEN! For top channel, insert bolts with washers from above the channel.

Check bottom track for cleanliness. Track should be free of all dirt and debris before inserting wall panels. Check that the bottom track is square. (See Dig Specifications for dimensions for specific shapes/sizes) The measurements from point "A" to point "C" and from point "B" to "D" should be the same.

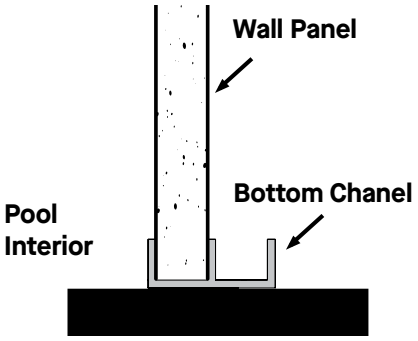


WALL PANEL CONNECTION ASSEMBLY

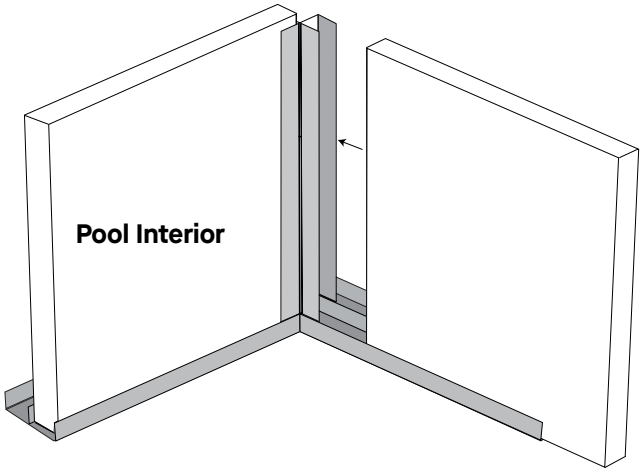
Be sure that bottom channel and wall panels are free of debris before beginning assembly.

Once bottom track is assembled, begin installing wall panels. On straight wall pools, always start with the end corner connections first, working towards the middle as shown. It is important that the final panel assembled is a straight panel connection. As wall panels are assembled, install top channel per channel assembly instructions above.

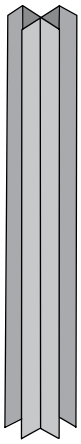
WALL PANEL CONNECTION ASSEMBLY



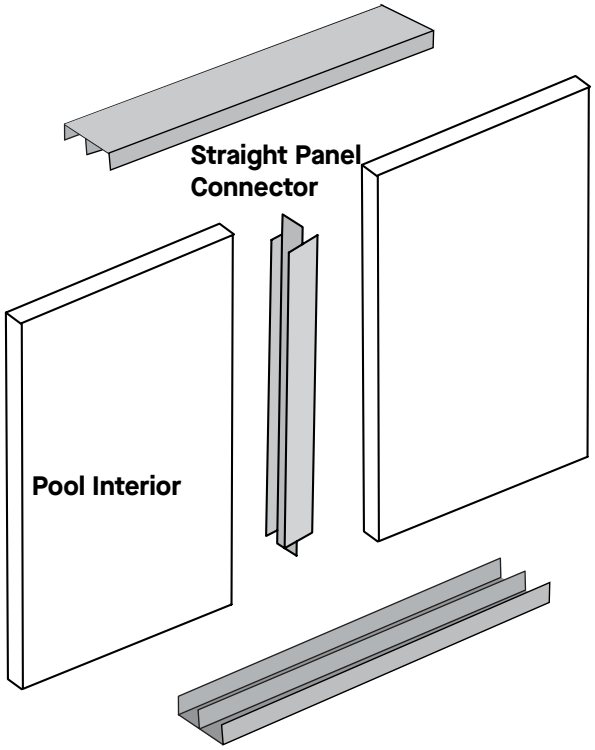
Insert panels in bottom channel in pool interior side of track as shown below. These must be properly aligned or installation of subsequent panels will be difficult.



Connecting Panels at 90° Corners



90° Corner Connector



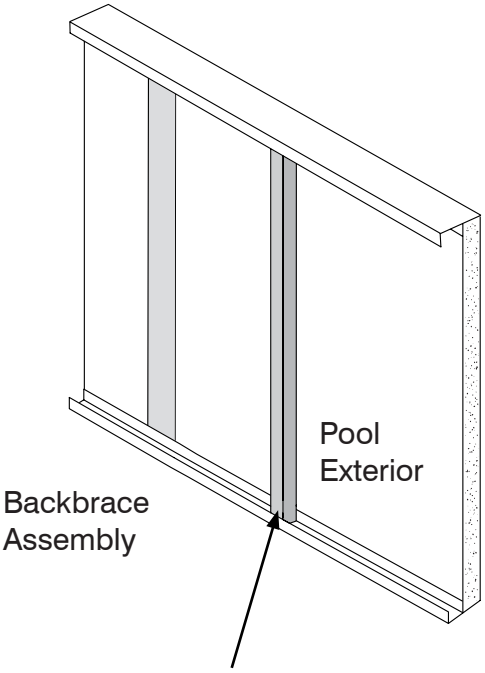
Connecting Straight Panels

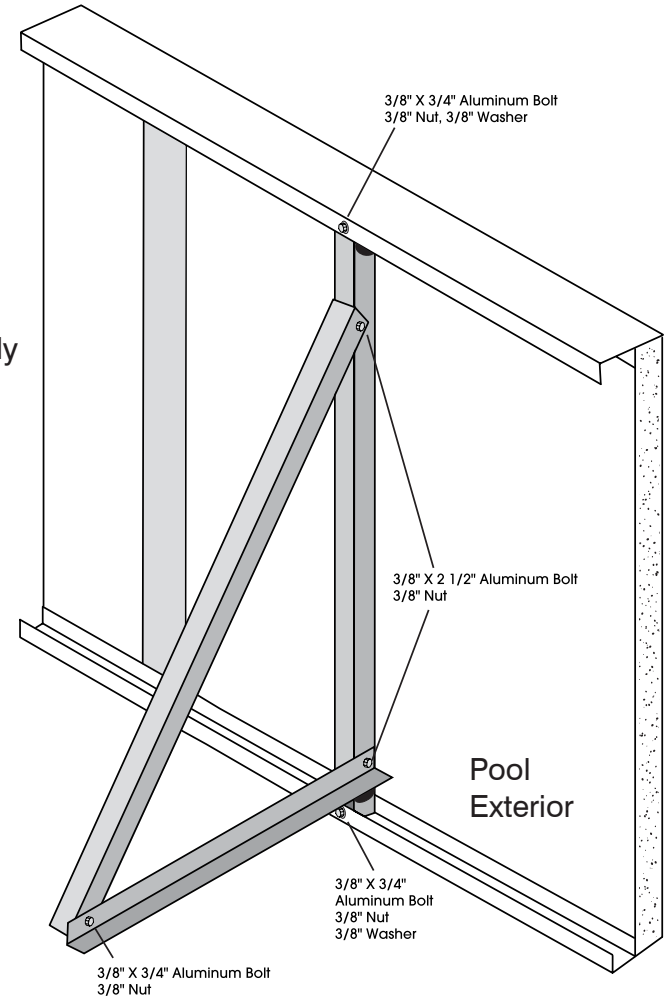
When corner panels on both ends are assembled, begin with the straight panel assembly, working towards the middle as indicated on page 7. Slide panels into bottom track, connecting as shown at left.

Continue this process with the remaining wall panels stopping before installing the final wall panel.

A-FRAME & BACKBRACE CONSTRUCTION

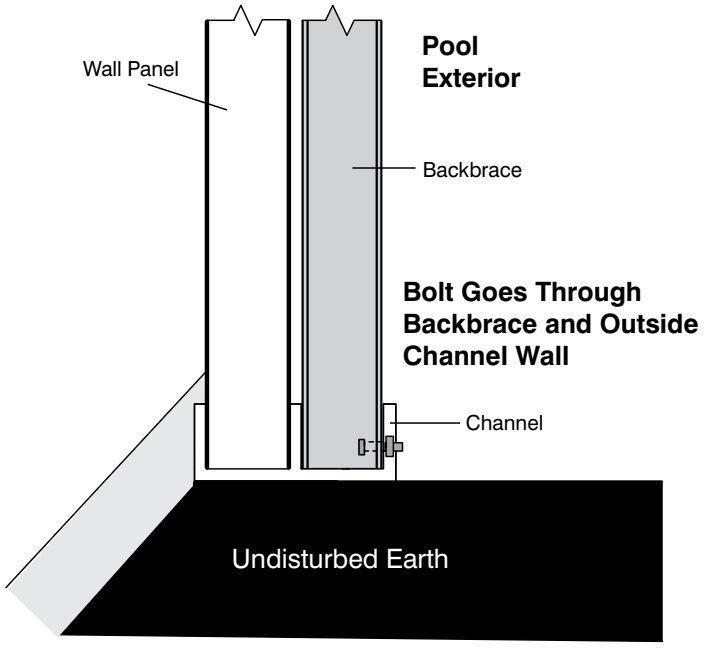
Position backbraces and attached A-Frames in their proper locations around the pool. Please Refer to the dig specifications for spacing and placement. The backbrace is bolted to the top and bottom channel, the diagonal and bottom horizontal A-Frame parts are bolted together then to the backbraces.





***Installation Note:** The backbrace will have two holes drilled into the channel. Position the end "up" that has the hole closest to the end.

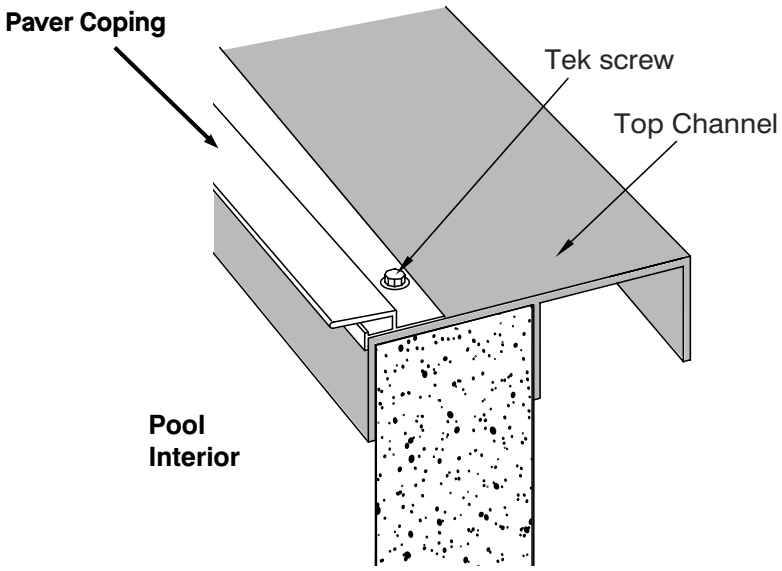
The bottom of the A-Frame is 2" to 4" off the ground to better encase the A-Frame in the concrete collar. Drive a drift pin down through the pre-drilled hole in the horizontal of the A-Frame.



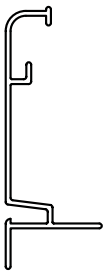
COPING CONNECTION

Straight Panel Coping Connection

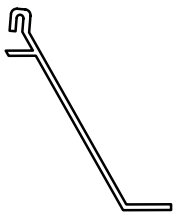
The straight wall pools with top channel do not use the wall clips. Coping is Tek screwed directly to the top channel. As with straight wall panel assembly, it is recommended that coping installation start at the corners first. Support Anchors every 2 1/2'-3'.



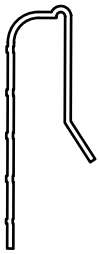
RCR Coping
Part # 3324-N (notched)
3324-S (straight)



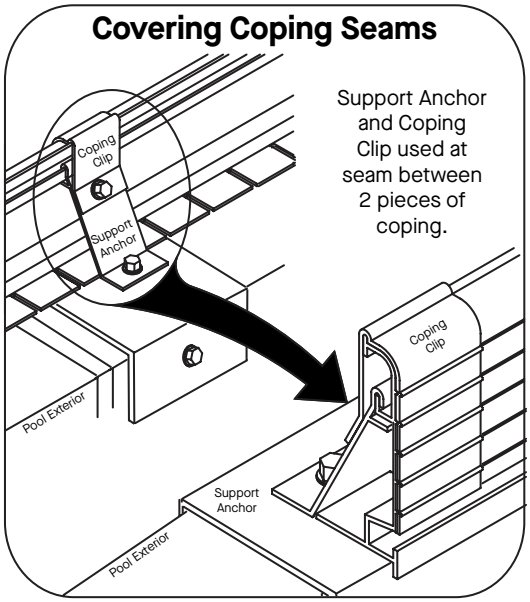
Support Anchor
Part # 3324-A



Coping Clip
Part # 3324-C



Covering Coping Seams

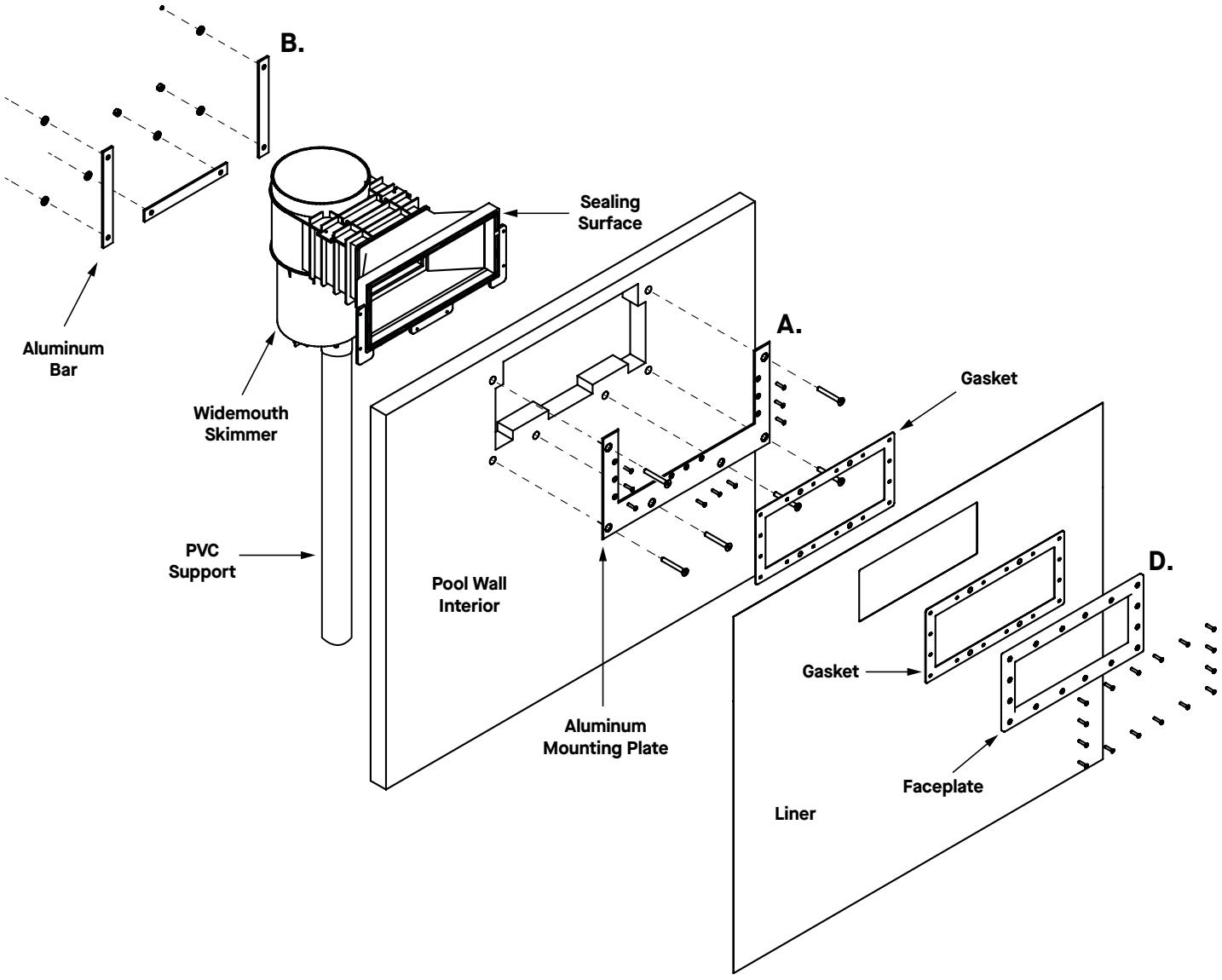


SKIMMER ASSEMBLY: STRAIGHT WALL/WIDE MOUTH SKIMMER

Mount the aluminum wide mouth skimmer mounting plate **(Fig. A)** to the inside pool wall using the included nuts and bolts, positioning the aluminum bars **(Fig. B)** on the outside of the pool wall as shown below. Keep all connections slightly loose to ensure correct skimmer placement.

IT IS CRITICAL TO MAKE SURE THE SKIMMER IS SUPPORTED BY A LENGTH OF PVC TO PREVENT SETTLING.

Mount wide mouth skimmer to aluminum skimmer mounting plate using the included screws. Depending on the style of skimmer used, you may have to pre-drill holes in the skimmer body to set all screws. Now securely tighten nuts and bolts on mounting kit and cover edges of aluminum plate with duct tape.



Position one wide mouth gasket **(Fig. C)** on the sealing surface of the skimmer and secure tightly with duct tape. When dropping the liner, you may want to install the liner bead around skimmer locations last, in order to avoid disturbing gasket placement.

After liner has been installed and water level approaches skimmer, prep skimmer faceplate **(Fig. D)** by lining up faceplate and gasket, and then carefully drive screws through faceplate, gasket, liner, interior gasket and into skimmer throat. Securing the corners first will help ensure correct placement.

As water level approaches skimmer, carefully cut out liner from inside of skimmer faceplate with sharp blade, making sure to avoid nicking the gaskets.

RETURN FITTING ASSEMBLY

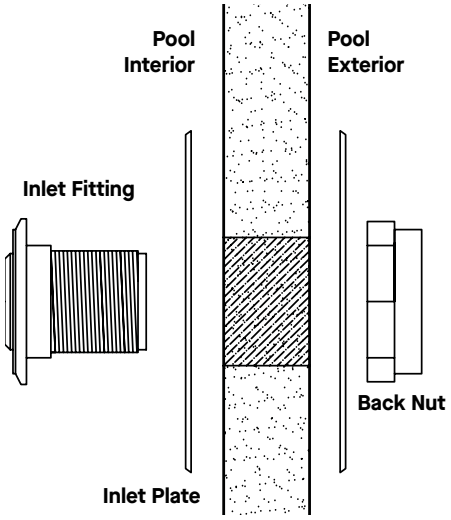
The return fitting kit includes four parts: inlet fitting, 2 inlet plates and a back nut.

Install the inlet fitting in the inlet plate, with the inlet plates over the threads on the interior and exterior of the pool, then thread the back nut onto the fitting. **DO NOT OVERTIGHTEN.**

For additional return fittings, drill 3" hole (with 3" hole saw), 12" down from top of panel. Edges will be sharp but not in contact with liner or hands once wall fitting has been installed. Install return wall fitting per directions, firmly. Do not over tighten.

Note: For the Latham IED light, drill hole 14" down from top of panel. Installation is identical to return fitting.

The return faceplates are attached after the liner is installed.



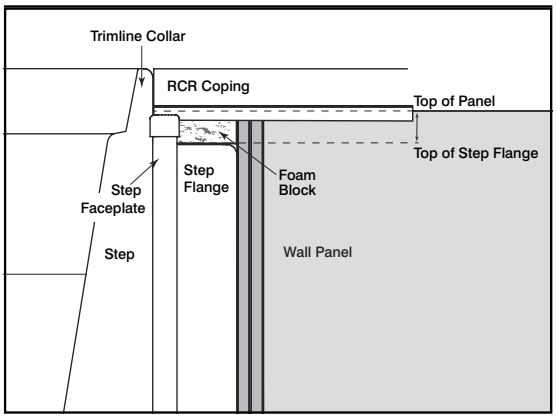
WALK-IN STEP INSTALLATION

Install leg supports for the steps. For steps supplied by Latham Insulated Panel Pools, instructions will be provided. If steps are purchased separately through another provider, verify compatibility by talking with a Latham Pools representative. Be sure to check step manufacturer's instructions as the step supports will vary by manufacturer.

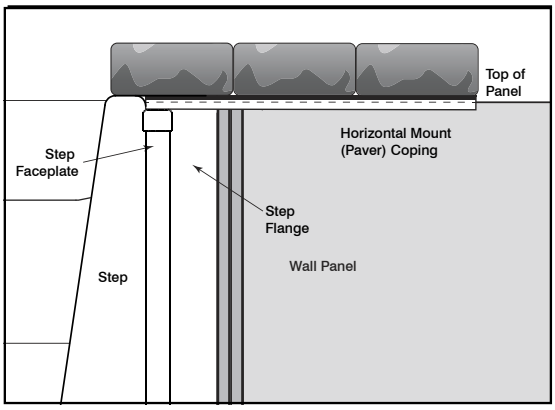
Position the step in the desired location. Level step, establish benchmark. The benchmark (finished height of the pool) includes the wall height, the coping and the decking (concrete, pavers, etc). Adjust height of step by aligning top of coping with top of step and plumb by checking front face of step unit with adjoining panel. See images below to determine the proper benchmark for your installation.

Once step is positioned, check levels from side to side and front to back.

Trimline Step with RCR Coping



Cantilever Step with Paver Coping



WALK-IN STEP INSTALLATION

Straight Wall Step Connection

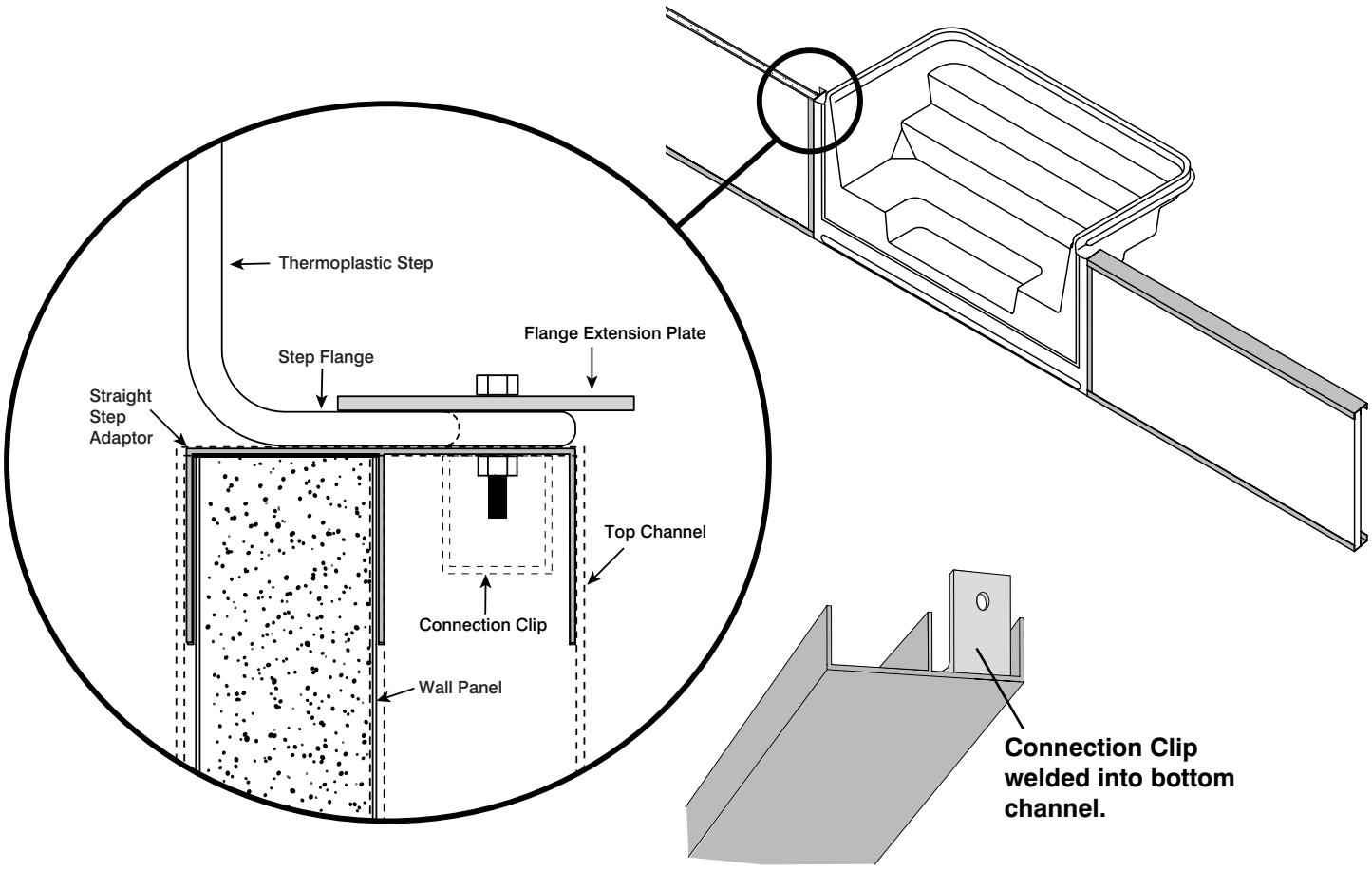
1. Temporarily attach the step adapter to panel and top and bottom channels.
2. Properly align top channel with coping top of step. The panel should be vertical and the step top should be level.
3. To install, temporarily clamp (using C clamp or vise grips) step connector to step flange.
4. Use pre-drilled holes in stair connector as a guide for drilling holes through the stair flange.
5. Bolt the stair connector to step flange with backer washers and nuts on the inside of the step flange.

Important: Keep nuts very loose until all panels are installed. Final adjusting of the step is done at this time.

6. Install wall panel into bottom channel and stair adaptor. Align connection clip in bottom channel to step flange. Use hole in clip as a guide through stair adaptor and step flange. Secure with nut, bolt and backer washer.
7. Bolt back brace and install A-Frame at nearest pre-drilled hole in channel.
8. Complete installation of remaining panels.
9. Tighten all nuts, check for plumb, level and square of pool and step.

Both pool and step must be encased in a concrete collar.

Note: Remember to remove stair gaskets and faceplates before installing liner.

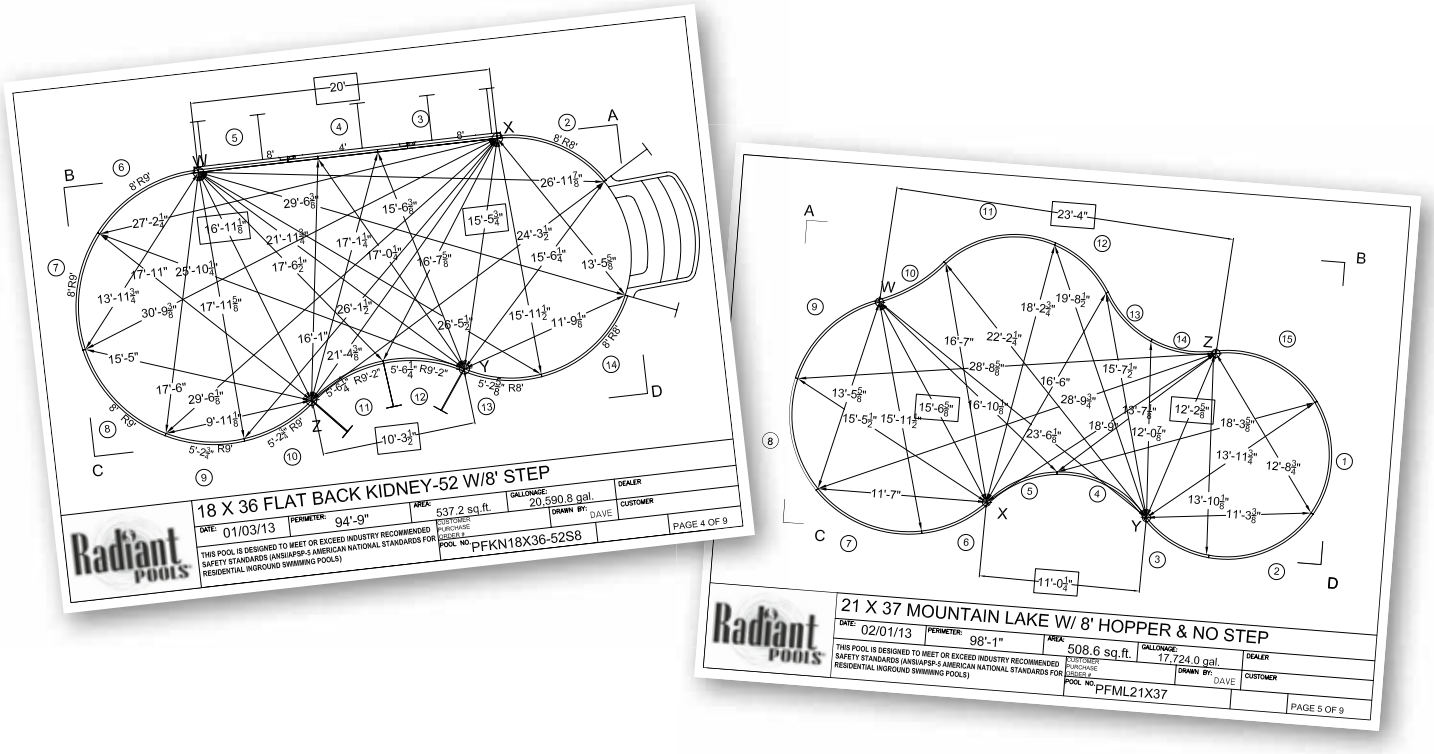


STOP!

DO NOT PROCEED BEFORE CHECKING FINAL CROSS MEASUREMENTS!

All Latham Insulated Panel Pools are shipped with drawings with cross measurements.
If you do not have this page, call your sales representative now!

Checking these layout dimensions is critical and cannot be skipped.



If you are off by 1/4" or more, the walls need to be adjusted before locking them into place with the concrete collar or you will have problems installing the liner.

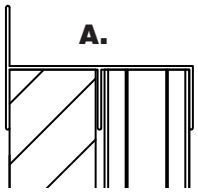
INGROUND STEP FORM INSTALLATION

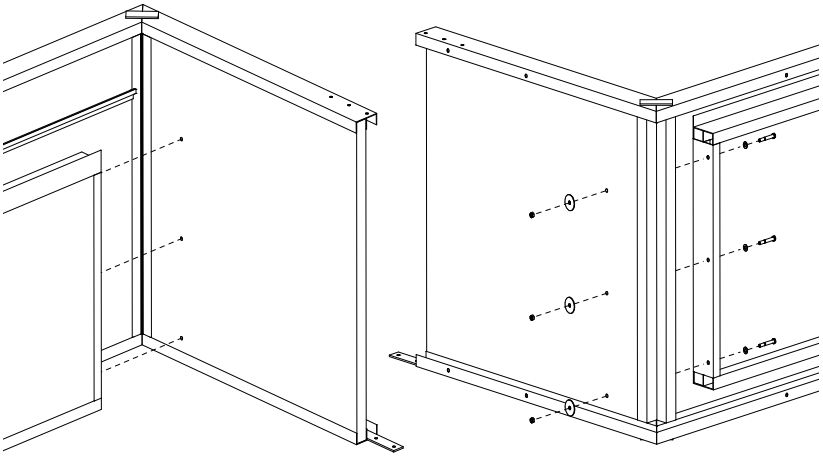
DL-3565

1. After the perimeter pool structure has been assembled, leveled, and squared, use the supplied drawing packet to measure step form locations. Using a spray marking paint to identify form placement may help place correctly.

2. Most step forms will ship in modular, easy to assemble panels. Identify the panels in your tallest riser and place them in the pool structure, starting with the panel closest to a wall.

   NOTE: The top of the step form panel will have an extended flange pointed upwards (Fig A). The top of this flange will be your step benchmark, and where your base material (poolcrete, vermiculte, etc.) will come to.





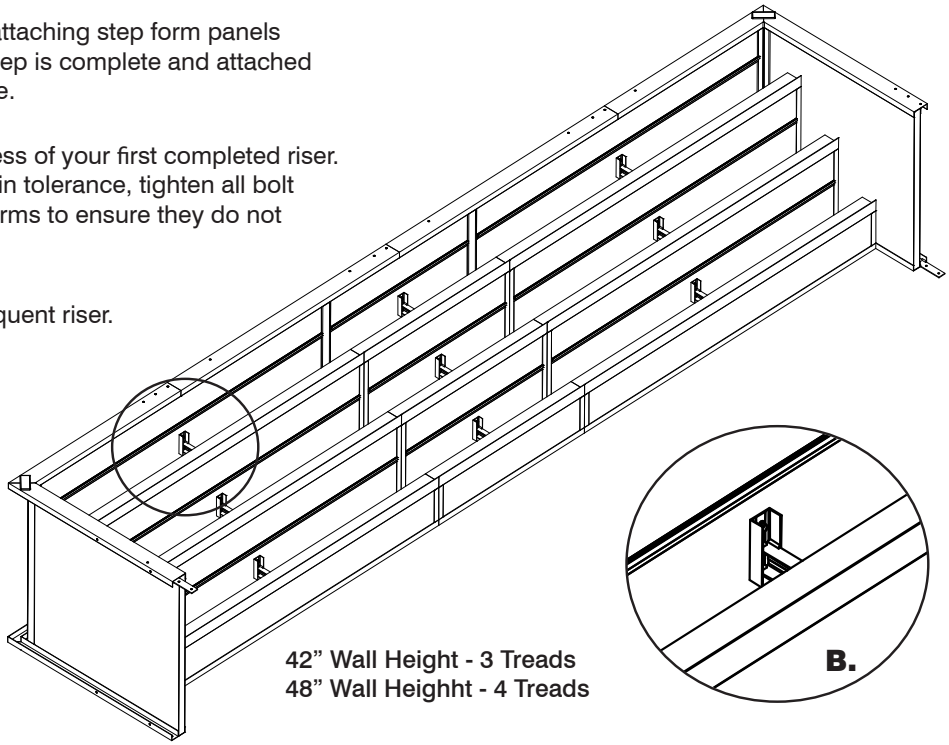
3. When your first panel is placed and leveled, use a 7/16” bit to drill through the pool wall panel, using the holes in the step form side channel as a guide (Marking the hole location with a sharpie and then removing panel to drill may make drilling easier). Then attach to the wall with the supplied nuts, bolts, and washers. LEAVE BOLTS HAND-TIGHT TO ENSURE PROPER PLACEMENT OF ENTIRE STEP FORM.

4. Continue placing, leveling, and attaching step form panels until the entire span of the first step is complete and attached to both ends of the pool structure.

5. Verify measurements and levelness of your first completed riser. When all measurements are within tolerance, tighten all bolt connections and stake / brace forms to ensure they do not move during concrete pour.

6. Repeat steps 3-5 for each subsequent riser.

7. Install bracing cleats (Fig. B), attaching each riser to the next subsequent riser/pool wall, at the clips on the backside of the forms.Tighten bolts completely after verifying that tread width is accurate.



42” Wall Height - 3 Treads
48” Wall Heighht - 4 Treads

8. Mark the step benchmark (see **Fig A.**) of each step on the riser or wall panel behind it and install the included bead receiver so that the top of the extrusion is at this line. (**Fig. C**)

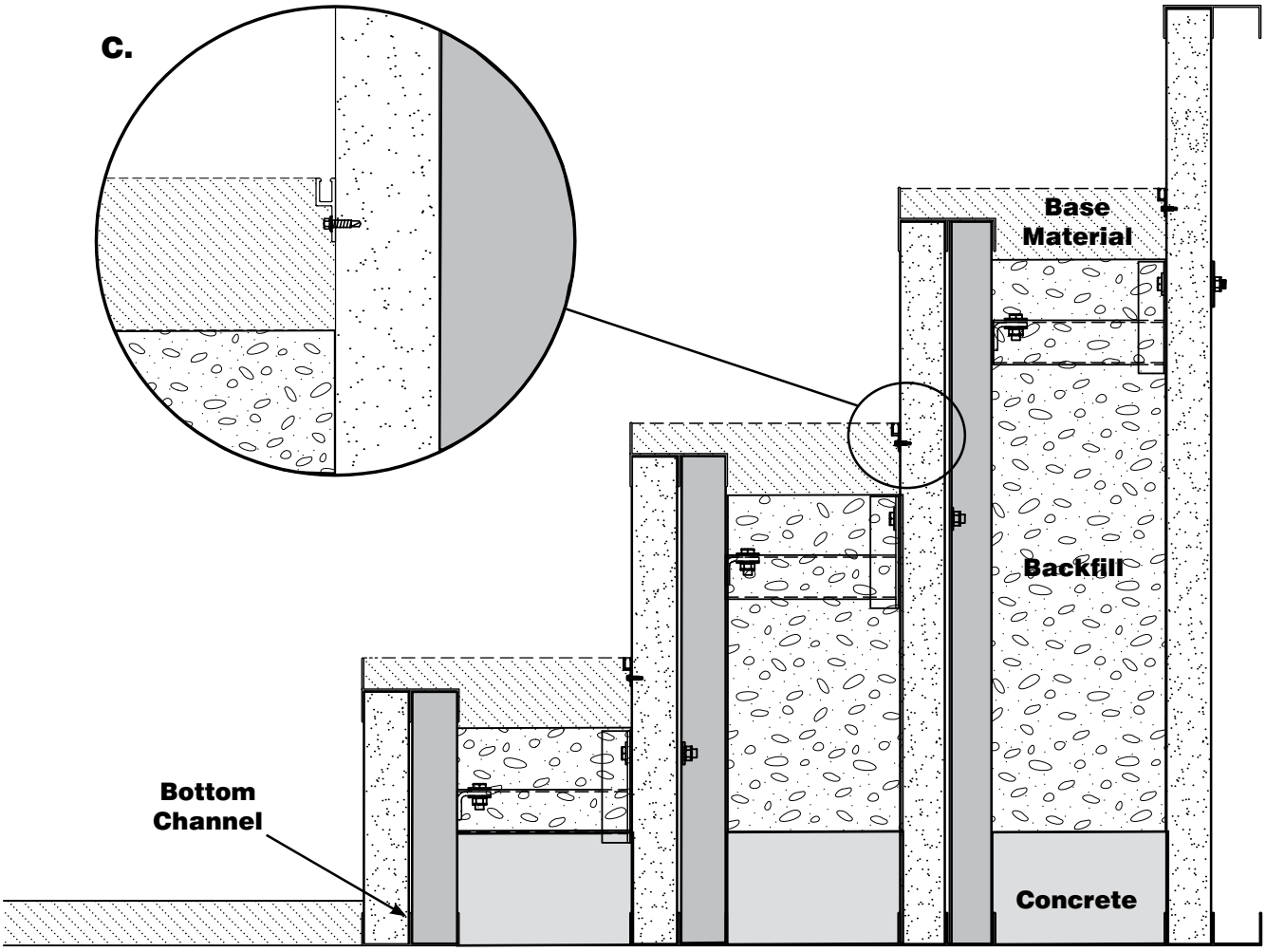
9. After making sure all forms are correctly set and braced, pour a 4-6" bed of concrete to provide an anchor for the forms. This concrete should encase the inner channel on the bottom E-channel of the step form panel. This concrete pour can happen at the same time as the concrete collar around the main pool structure. This step is not required on tread widths of less than 18".

10. Backfill step voids at the same time as main pool structure is backfilled, making sure that backfill levels increase evenly. Step voids must be backfilled using hand tools in order to avoid undue pressure and movement on panels. Backfill should be hand tamped up to approximately 4" from the top of the flange on the top channel.

11. Finish off the final 4" of each step with the base material of your choosing (vermiculite, poolcrete, etc.), making sure that base material comes fully up to the benchmark, and that the bead track of the receiver is exposed and clean (using blue painter's tape to temporarily block off receiver during base material application may help in keeping bead track clean).

12. After all material has set, tape all joints and hard edges with Gorilla Tape.

13. Liners sourced through Radiant Pools will come with pre-welded bead at track locations. Use of liner lock to hold bead in place during installation may help install.



Note: Concrete Required for tread width greater than 18"

CONCRETE COLLAR GUIDE

Check with local building codes before installing your Latham Insulated Panel Pool inground. Latham Pools recommends a 12" x 16" concrete collar for 48" and 52" wall heights. around the entire pool **(fig. 1)** and an 8" x 24" concrete pour at each A-Frame location **(fig. 2)**. Concrete recommended is either #2500 pound mix or "Swimming Pool Collar Mix".

Do not pour concrete directly on the pool walls. Pour concrete away from the wall and let it flow to the wall.

If you are installing a thermoplastic walk-in step, Latham Pools **REQUIRES** that concrete be poured behind the step and panels next to the step **(fig. 3)**. Add 2.5 yards of concrete to the 'Estimating Concrete Requirements' for the concrete around the step and A-frames.

Note: Before pouring concrete collar, check with your electrician as he may want to bond the pool first.

fig. 1 **Concrete Collar (48" & 52" Wall Height)**

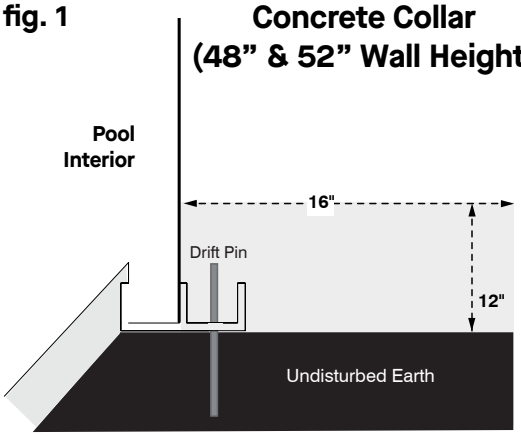


fig. 2 **Concrete Collar at A-Frame Location**

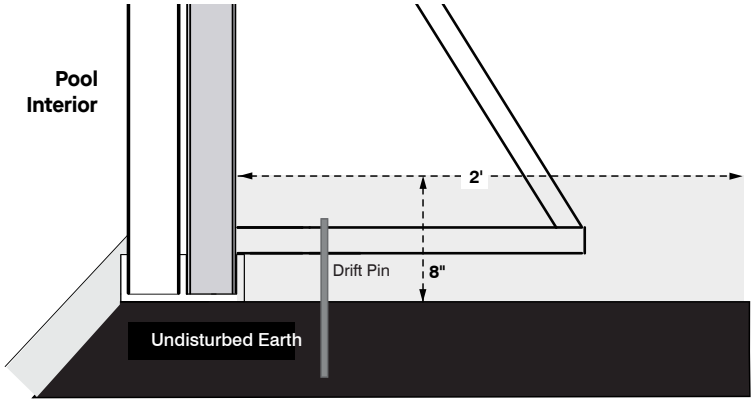
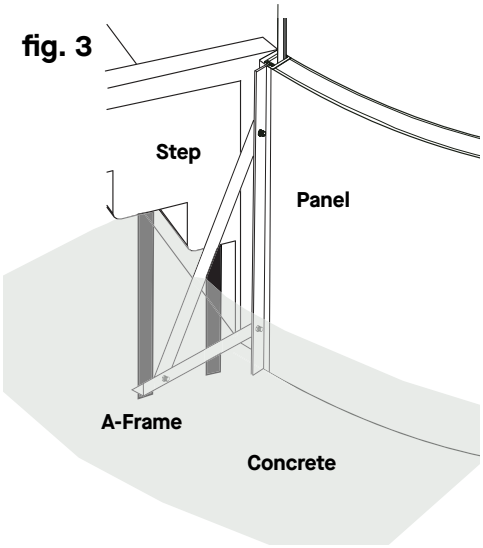


fig. 3



Concrete Required at Step Location

Note: Complete backfill is required around the step.

Estimating Concrete Requirements:

These are minimum estimating figures. It is recommended that estimates be on the high end as the excess can be poured around A-Frame. Select the appropriate size collar based on your pool wall height and combine it with your A-Frame estimate for total yards of concrete required.

12"x16" Collar (48" & 52" Wall Height): Pool Perimeter (ft.) x .06 = Yards required.
A-Frames: Number of A-Frames x .15

Example: For a 20×40 42" Rectangle with a perimeter of 120' and 20 A-Frames the required yards would be:

(120' x 0.04) + (20 A-Frames x .15) = 7.8 yards of concrete

BACKFILL AND DRAINAGE

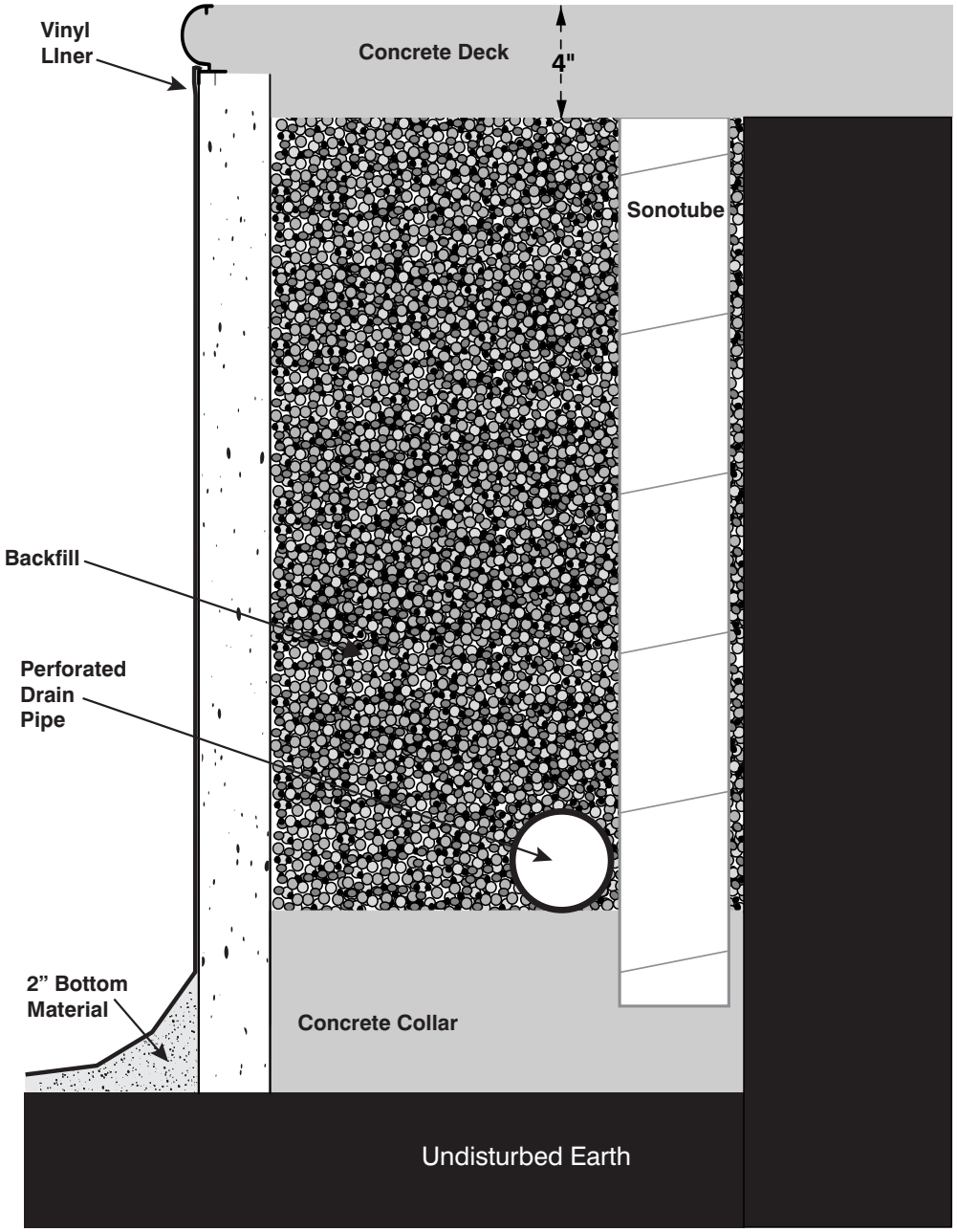
Before backfilling, check with electrician for pool bonding. Sonotubes may be installed at the time of collar pour to support the deck.

Backfill may go directly against a Latham Insulated Panel pool wall. Crushed stone/gravel 3/8" - 3/4" in diameter is recommended. Do not use expansive soil (clay).

Uphill run-off should be redirected around the pool incorporating a French drain concept using a perforated drain pipe and water relief area away from the pool and other structures.

Backfill as the pool is filling with water, manually compacting every 8"-12" (Do not use compacting machinery.) Hand backfill around skimmers, lights and inlets. Be sure that piping is buried, but not crushed.

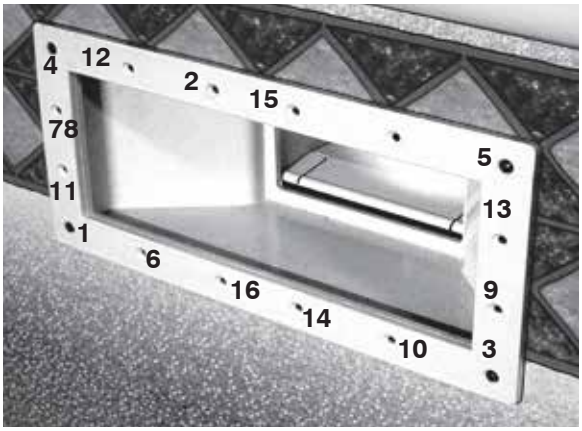
If backfilling completely before pool is filled, the straight walls must be cross braced at the top, inside the pool. This is not the recommended method of backfilling your Latham Pool.



INSTALLING FACEPLATES

Once the water level reaches 2”-3” from the return and skimmer, install the faceplates. Carefully locate the screw holes for each opening. Once located, carefully puncture the liner with an ice pick or nail. Attach skimmer faceplate with 1” screws and hand tighten evenly in order as shown in skimmer faceplate image below. When installing return faceplate, hand tighten each screw by a half turn, alternating between each, until all are tightened evenly. This ensures uniform compression of sealing gaskets. Using a razor knife, carefully trim the liner from inside of the openings for the skimmer and return. When done, install the eyeball into the return.

Locate screw holes for faceplate.



Skimmer faceplate installed w/ screw tightening sequence

Trim liner from return opening.

Return faceplate installed.

COMPLETING INSTALLATION

Please refer to manufacturers’ installation instructions for all other installation components, including liner.

latham

The Pool Company™

lathampool.com | 800-833-3800

© Latham Pool Products, Inc. 2024. All rights reserved.