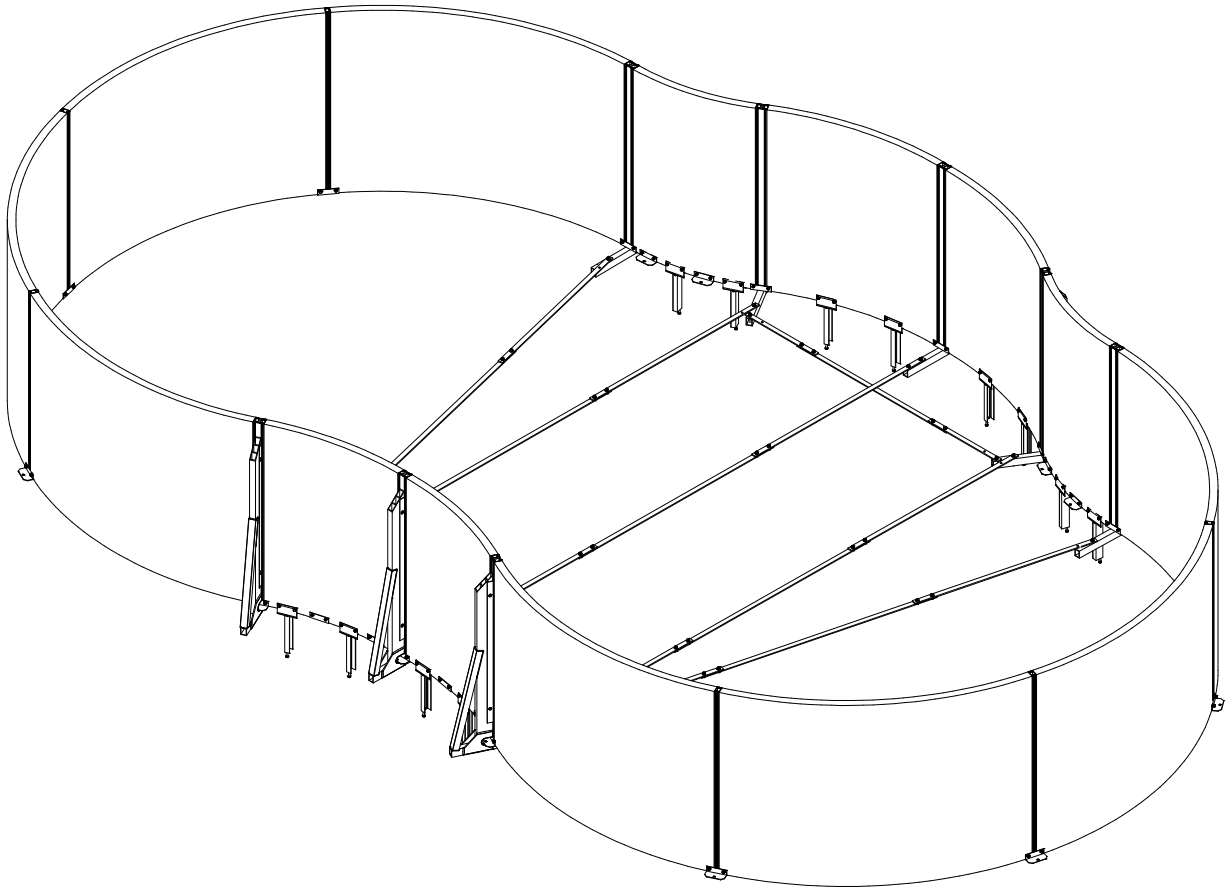
The Metric Series Freeform Pool

Installation Manual



Radiant POOLS™

INTRODUCTION

The Installation of the Radiant Metric Series Freeform 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 prior to starting.

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 Radiant pools are designed to meet or exceed industry recommended safety standards (*ANSI/APSP-5 American National Standards for Residential Inground Swimming Pools*), special attention must be paid to all installation procedures that the installer performs and controls. Spend time to assure that the entire pool framework is **perfectly level**. Unlevel pools place extreme pressures on the pool walls. An earth mound or pool cove must also be installed. This keeps the pool liner from creeping out from under the pool wall. 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)

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

Radiant 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 defects due to manufacturing for as long as you own your home. Compare our warranty with any other pool. 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 Radiant 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.

IMPORTANT SAFETY INFORMATION

WARNING: DO NOT DIVE OR JUMP. IT IS NOT DESIGNED FOR DIVING OR JUMPING. YOUR POOL IS APPROXIMATELY 4' DEEP. IF YOU DIVE OR JUMP INTO YOUR POOL YOU RUN THE RISK OF PERMANENT INJURY OR DEATH.

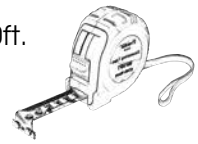
Enclosed in the liner box is the safety envelope. The safety stickers must be installed as per instructions. Failure to properly install warning labels will void warranty. Alert all visitors and family of the risks associated with jumping and/or diving and point out all warning labels supplied. Failure 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. Do not walk on the top rail without deck and fence. It can be slippery and is not a walkway.
3. Be sure to install all safety labels provided with your pool according to the safety instructions.
4. Keep a 50' safety rope with a flotation buoy with an outside diameter of 15" accessible in a prominent area by your pool.
5. 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
6. 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 homebuilt deck.
7. 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.
8. 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.
9. 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.
10. 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.
11. Never drink alcoholic beverages or use any intoxicants which could hinder your judgment and reflexes.
12. Never use the pool alone. All children must be supervised continuously.
13. 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.
14. 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.
15. Do not use pool during electrical or rain storms.
16. See available Association of Spa and Pool Professionals (APSP) publications for more tips on pool safety.

TOOLS NEEDED

Tape measure, 100ft.

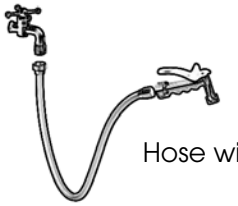


Orange Marking Spray Paint

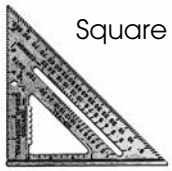
Metal File

Utility Knife

Transit/Laser Level



Hose with spray nozzle



Square

String

Duct Tape

Level

Cloth rag

Rubber Mallet

Long handled pointed shovel

Short handle square shovel

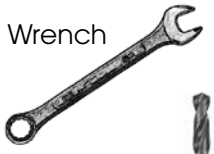
Socket Set

Hacksaw

Pick or Mattock

Power Drill

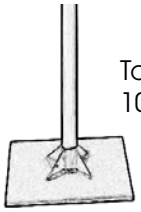
9/16" Open End Wrench



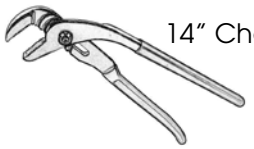
1/4" Hex nut driver bit

Screwdrivers, Flathead and Phillips

7/16" and 1/8" Drill bits



Tamper, 10 or 12 in. Square

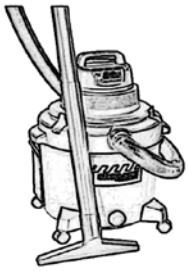


14" Channel Locks

Extension Cord

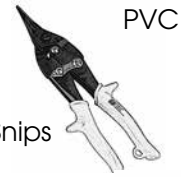
Pool trowel

PVC Pipe Cutter



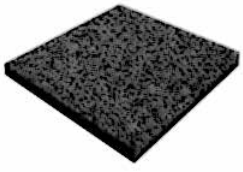
Shop Vac

Rake



Tin Snips

4 Yards of Masonry Sand



2" Patio Block

Hand Broom

Cooking Spray

Soft bristle broom

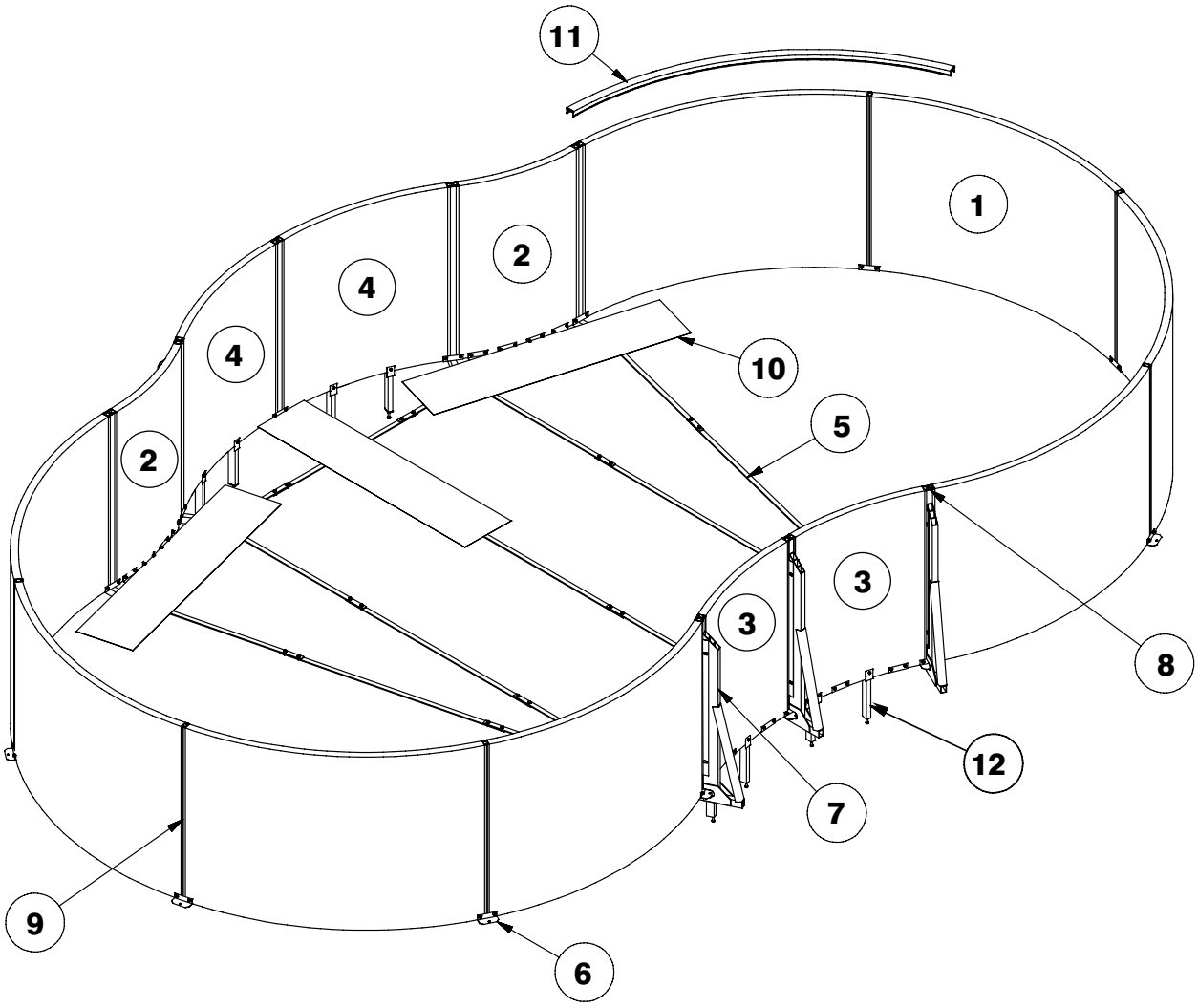
Wheelbarrow

POOL COMPONENTS CHECKLIST

PART DESCRIPTION	14 x 22	16 x 28	18 x 32
WALL PANELS: STANDARD END PANELS:	(6) 7' 2"	(8) 6' 5"	(8) 7' 5⅛"
WALL PANELS: SPECIAL RADIUS-BUMP:	(2) 3' 1¼"	(2) 4' ¼"	(2) 4' 9⅜"
WALL PANELS: REVERSE RADIUS-INDENT:	(2) 2' 5⅝"	(2) 3' 3¼"	(2) 4' 1"
WALL PANELS: REVERSE RADIUS-BUMP:	(2) 2' 3½"	(2) 2' 9⅜"	(2) 3' 6¾"
BUTTRESS AFRAMES	8	8	8
HOLD DOWN PLATE: 16" X 72" STEEL	5	6	6
BOTTOM STRAP KIT(6 SUB KITS EACH)	1	1	1
FREEFORM METRIC HARDWARE BUNDLE:	1	1	1
INSTALLATION MANUAL	1	1	1
SHORT SPLINES 5 3/4"	32	32	32
40" EXTENDED (T) SPLINES	16	16	16
ST. PANEL CONNECTOR	8	8	8
ANCHOR PLATE- REV. PANELS	8	8	8
SECOND INLET FITTING	1	1	1
12" PANEL LEVELER	12	12	12
STANDARD METRIC HARDWARE BUNDLE:			
HB-PM52J12	1		
HB-PM52J14		1	1
A-FRAME COVER KIT (set of 8)	1	1	1
COPING KIT	1	1	1
SKIMMER KIT	1	1	1
LINER	1	1	1
REQUIRED COMPONENTS NOT INCLUDED IN POOL KIT:			
2" x 8" x 16" PATIO BLOCK	4	6	6
2500# CONCRETE FOOTER MIX	2.25yds	3yds	3.5yds
CLEAN SAND FOR UNDER LINER	2.5yds	3.5yds	4.5yds

IMPORTANT NOTE:
Do not allow splines or compressions seams to come in contact with sand or other debris as this will cause difficulty with installation. We recommend a small dust broom or damp cloth be available in the event that any dirt or debris finds its way to these parts.

METRIC SERIES FREEFORM POOL COMPONENTS



Drawings are for illustrative purposes and are not to scale.

#	COMPONENT
1	Radius Wall Panel
2	Reverse Radius Wall Panel - Bump
3	Reverse Radius Wall Panel - Indent
4	Special Radius Wall Panel - Bump
5	Bottom Strap and Base Support Assembly - reinforces structural stability
6	Anchor Plates - Add stability and alignment to radius wall panels
7	A-Frames & Extended Splines - imbedded in concrete for stability
8	Panel Connector
9	Standard Splines - Used at curved panel joints to join walls together
10	Hold Down Plates - reinforces structural stability
11	Standard Metric Coping - Secures liner & gives finished appearance
12	12” Panel Levelers

SELECTING POOL LOCATION

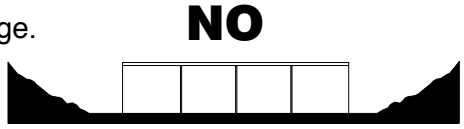
The selection and preparation of the pool site is your responsibility. The manufacturer can only suggest the proper techniques, indicate the important considerations, emphasize the precautions, and cannot be held responsible for damages to your pool that may result from failure to carefully follow all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

1. The surface on which your pool will stand must be absolutely level and solid. This condition should extend 1' beyond the actual pool area all around. The best surface is bare solid earth free from stones, roots and other sharp objects.

2. Allow plenty of play area around the pool. Fit the location into your landscaping plans.

3. The pool site must be accessible to electrical and water supply and should allow for disposal of great quantities of water when the pool is drained. All electric outlets within 10' must be GFI protected.

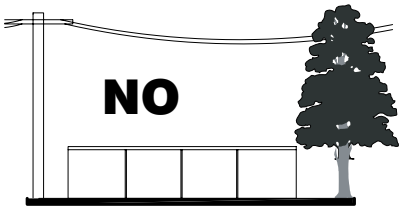
5. Do not set up your pool in hilly areas or areas with poor drainage. **For Semi-Inground Installations:The site of installation must accomodate an efficient drainage system to minimize the impact of heavy rain and high ground water conditions.**



4. When installing your pool on a solid level surface, it is imperative that you protect your pool and liner from chemicals and other foreign matter contained in the surface. Do not install your pool on peat moss, tar paper, roots, sticks, gravel or chemically treated or contaminated soil not approved for pool use. Any or all of these surfaces can ruin your pool and liner and will void your warranty. To prevent stones or other foreign material from damaging the liner it is recommended to build a 2" to 3" base of clean washed masonry sand or other suitable base material inside the entire pool.

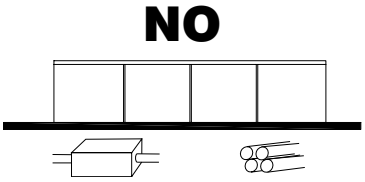
5. If ants or termites are prevalent in your area, have soil treated with insecticides and allow sufficient time for them to dissipate before continuing with pool installation.

6. Do not set up your pool under trees or under overhead wires.



7. Do not set up your pool near any existing structure such as your house, garage, etc., as this condition may compel diving or jumping into your pool which could result in permanent injury or death. You must check with your local municipality for all appropriate ordinances and regulations.

8. Do not set up your pool on or near any septic system or underground utilities.

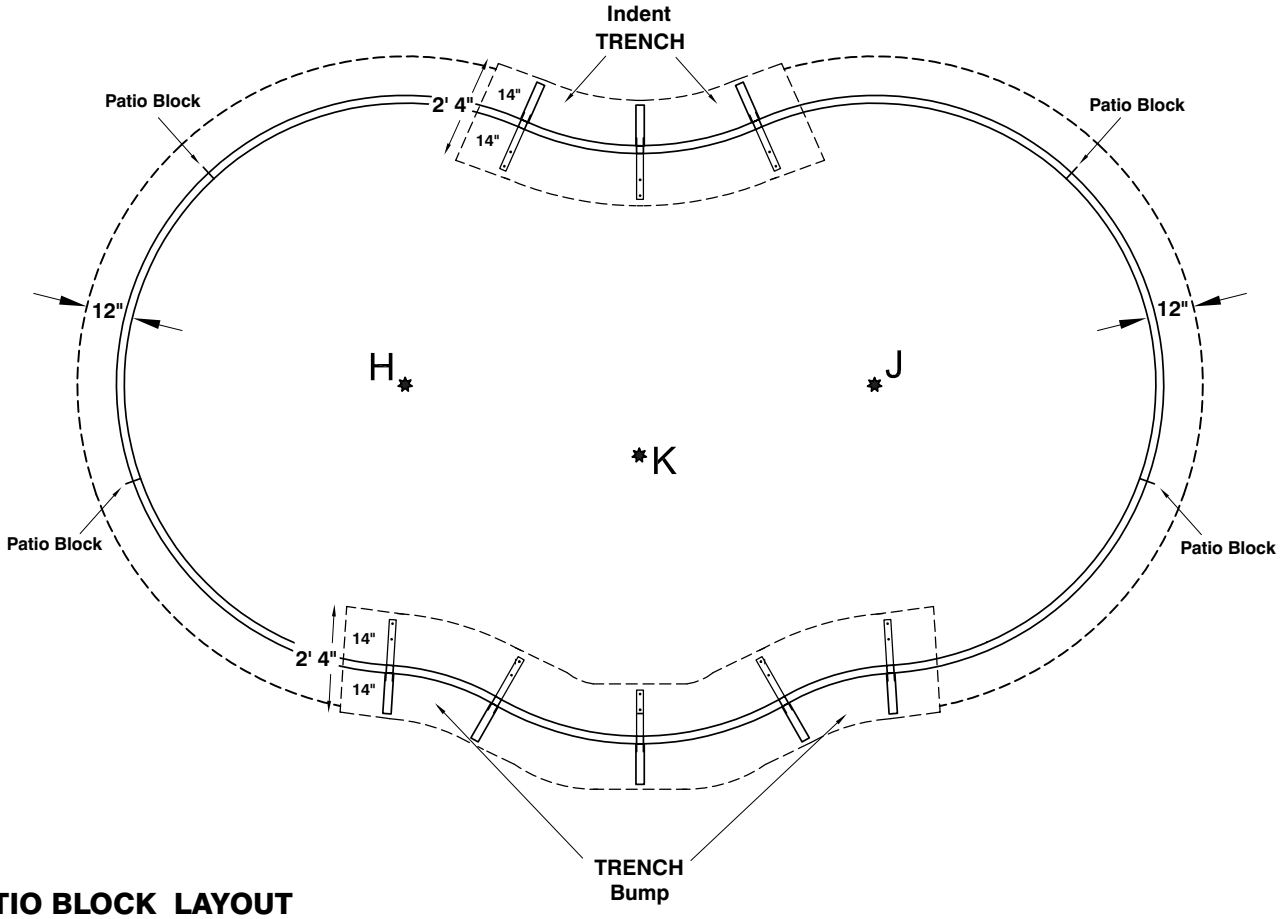


LAYOUT WITH LAWN TEMPLATE

1. Open and stretch Lawn template over area pool is to be installed.
2. Draw or paint outline of pool.
3. Mark trench beginning and ending points.
4. Mark patio block locations for pool ends. 2 each end 14x22, 3 each end 16x28, 18x32.
5. Stake points H, J, and K for future use.
6. Remove lawn template
7. Mark a line 14” inside and outside of the pool outline from trench end to trench end.
8. Level ground of pool outline, include over dig of 12” at ends of pool.
9. Dig trench areas 12” below grade of pool (Benchmark).

TRENCH LAYOUT

POOL SIZE	FOOTPRINT A-B B-C	RADIUS POOL ENDS	TRENCH WIDTH	TRENCH LENGTHS	TRENCH DEPTH
14' x 22'	22' x 13'6"	6'R	28"	Bump: 13'6" Indent: 7'6"	12"
16' x 28'	27' x 16'	7'R	28"	Bump: 16'6" Indent: 9'	12"
18' x 32'	32' x 18'6"	8'R	28"	Bump: 19'4" Indent: 10'8"	12"



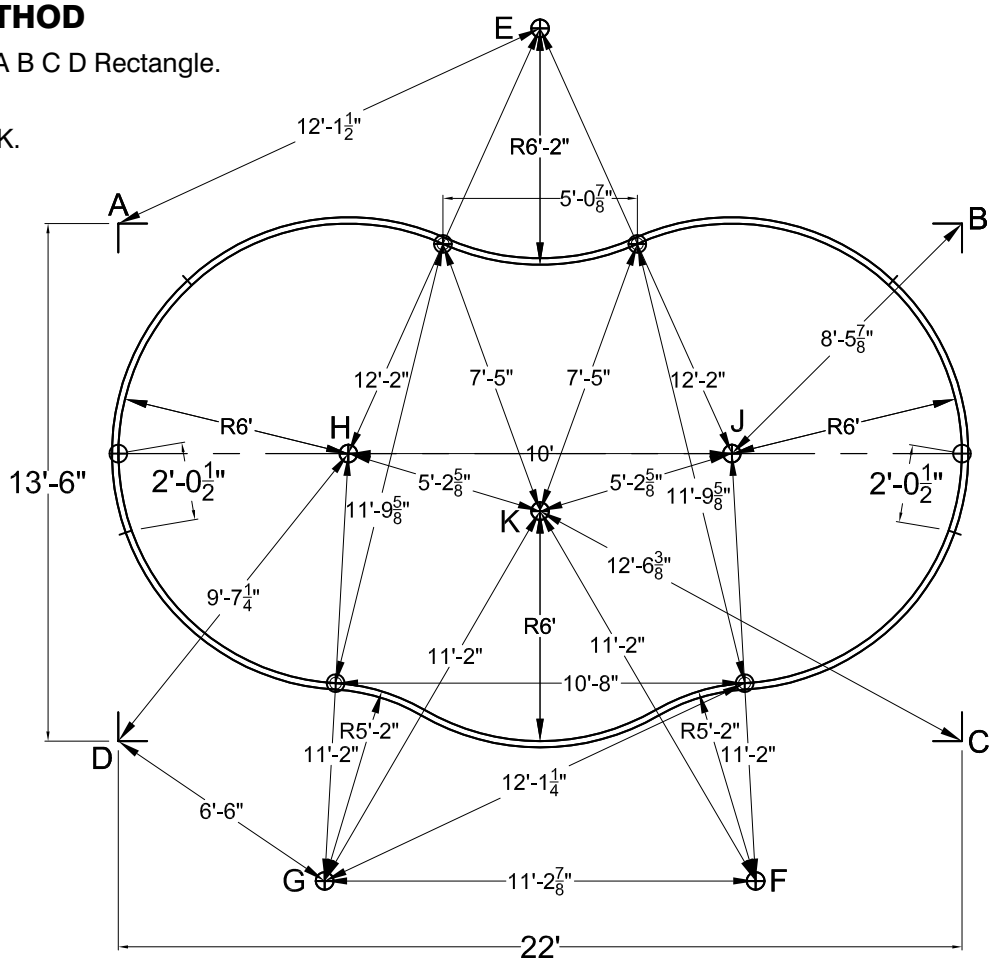
PATIO BLOCK LAYOUT WITH LAWN TEMPLATE

1. Locate marks made for patio block locations with template.
   (2 each end for the 14x22 and 3 at each end for the 16x28 and the 18x32.)
2. Center a block over each of the marks, half in and half out of the pool outline.
3. Top of blocks should be even and level with your pool benchmark.

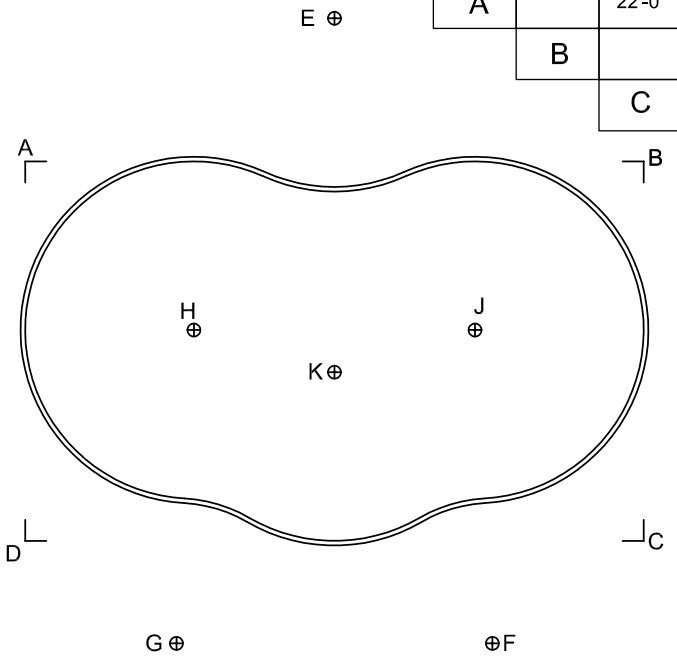
ALTERNATE LAYOUT (NO TEMPLATE)

POOL LAYOUT: A-B METHOD

1. Establish pool footprint with A B C D Rectangle. (example: 14' x 22')
2. Find points E, F, G, H, J and K.
3. Swing arcs from these points to create and paint an outline of the pool.



14' X 22' LAYOUT

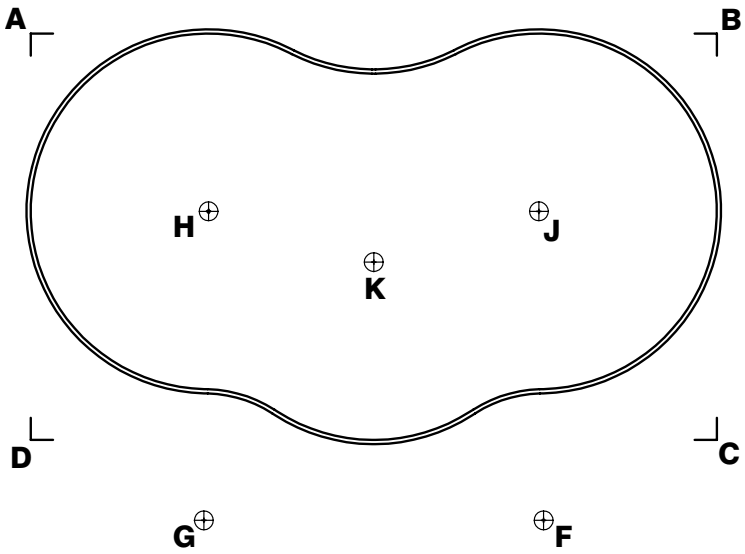


	A	B	C	D	E	F	G	H	J	K
A		22'-0"	25'-9¾"	13'-6"	12'-1½"	23'-10⅝"	17'-11⅝"	8'-5⅞"	17'-1"	13'-3¾"
	B		13'-6"	25'-9¾"	12'-1½"	17'-11⅝"	23'-10⅝"	17'-1"	8'-5⅞"	13'-3¾"
		C		22'-0"	21'-7¼"	6'-6"	17'-0¼"	17'-8"	9'-7¼"	12'-6⅜"
			D		21'-7¼"	17'-0¼"	6'-6"	9'-7¼"	17'-8"	12'-6⅜"
				E		22'-11¼"	22'-11¼"	12'-2"	12'-2"	12'-7⅛"
					F		11'-2⅞"	15'-4¾"	11'-2"	11'-2"
						G		11'-2"	15'-4¾"	11'-2"
							H		10'-0"	5'-2⅝"
								J		5'-2⅝"

ALTERNATE LAYOUT (NO TEMPLATE)

16' x 28'

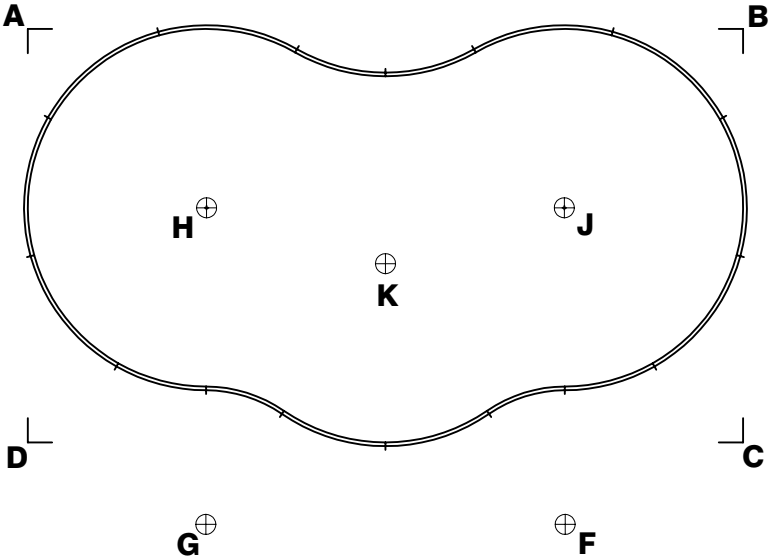
	A	B	C	D	E	F	G	H	J	K
A		27'-0"	31'-4 5/8"	16'-0"	14'-7 3/8"	27'-10"	20'-4 1/8"	9'-10 3/4"	21'-2 1/4"	16'-2 3/4"
	B		16'-0"	31'-4 5/8"	14'-7 3/8"	20'-4 1/8"	27'-10"	21'-2 1/4"	9'-10 3/4"	16'-2 3/4"
		C		27'-0"	25'-5 1/2"	7'-6 1/8"	20'-5 1/8"	21'-11 1/8"	11'-4 7/8"	15'-2 1/2"
			D		25'-5 1/2"	20'-5 1/8"	7'-6 1/8"	11'-4 7/8"	21'-11 1/8"	15'-2 1/2"
				E		25'-5 7/8"	25'-5 7/8"	14'-2"	14'-2"	14'-7"
					F		13'-4 1/2"	17'-11 1/4"	12'-2"	12'-2"
						G		12'-2"	17'-11 1/4"	12'-2"
							H		13'-0"	6'-9 5/8"
								J		6'-9 5/8"



16' X 28' LAYOUT

18' x 32'

	A	B	C	D	E	F	G	H	J	K
A		32'-0"	36'-11 1/2"	18'-6"	17'-1 1/4"	32'-8 3/8"	23'-6 5/8"	11'-3 3/4"	25'-3 5/8"	19'-1 5/8"
	B		18'-6"	36'-11 1/2"	17'-1 1/4"	23'-6 5/8"	32'-8 3/8"	25'-3 5/8"	11'-3 3/4"	19'-1 5/8"
		C		32'-0"	29'-3 5/8"	8'-9 1/4"	24'-3 3/4"	26'-2 3/8"	13'-2 3/8"	17'-10 5/8"
			D		29'-3 5/8"	24'-3 3/4"	8'-9 1/4"	13'-2 3/8"	26'-2 3/8"	17'-10 5/8"
				E		29'-4"	29'-4"	16'-2"	16'-2"	16'-6 5/8"
					F		16'-0 7/8"	21'-4 3/4"	14'-2"	14'-2"
						G		14'-2"	21'-4 3/4"	14'-2"
							H		16'-0"	8'-4 5/8"
								J		8'-4 5/8"



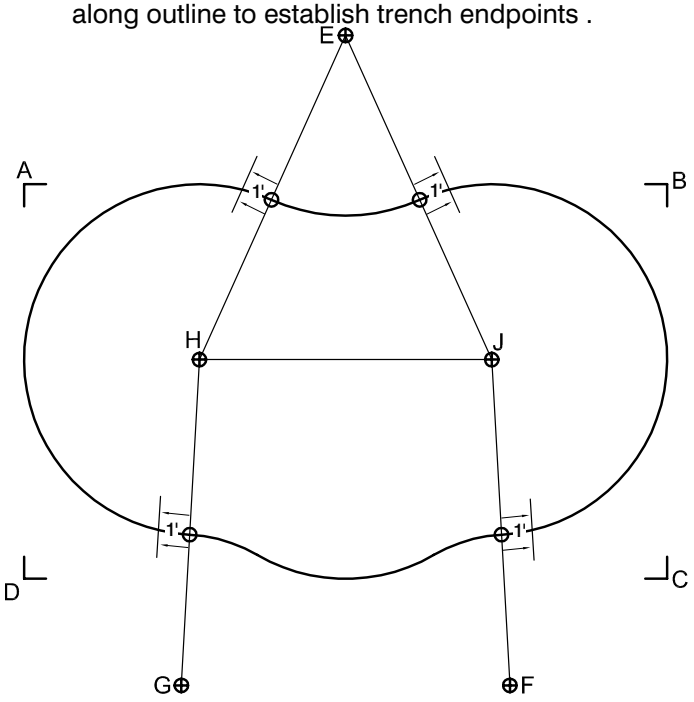
18' X 32' LAYOUT

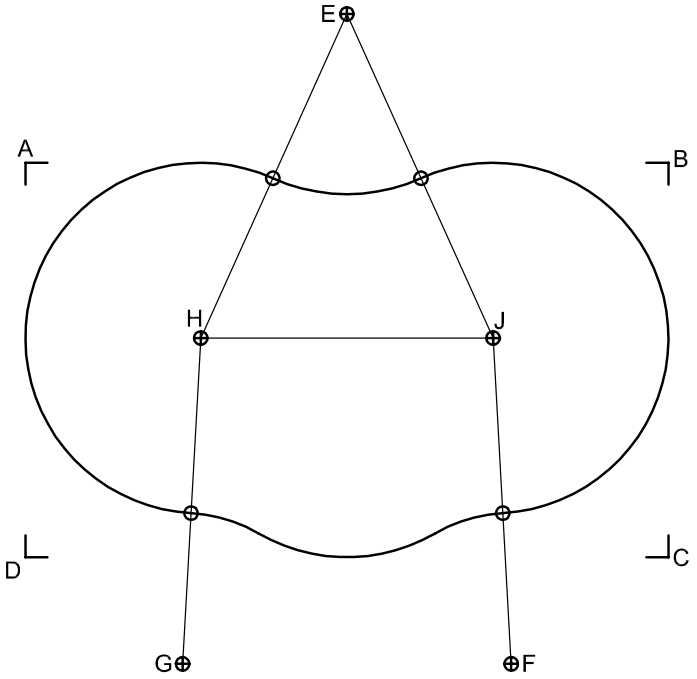
ALTERNATE LAYOUT (NO TEMPLATE)

4. Outline the trenches to be dug.

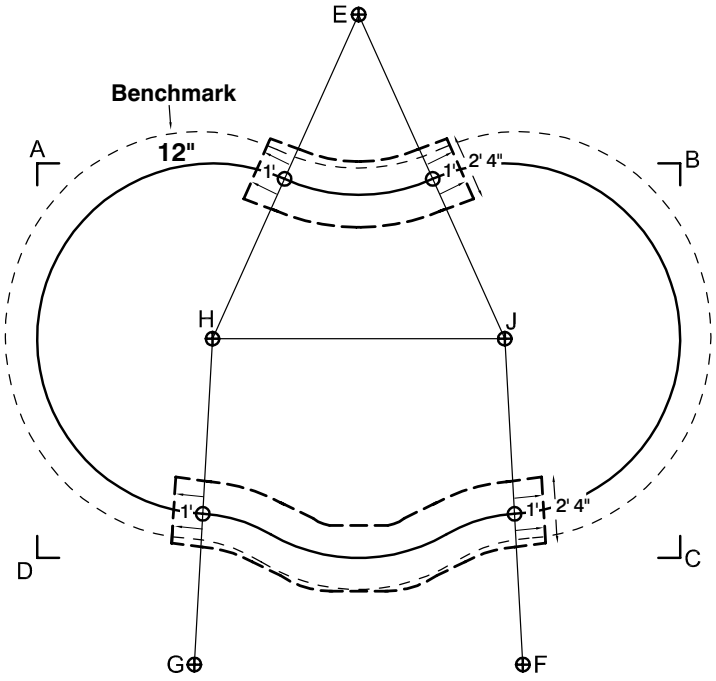
a. Mark points where G-H and F-J cross the pool outline. Mark points where E-H and E-J cross the pool outline.

b. Starting from where lines of above points intersect the pool outline, measure 1' towards ends of pool, along outline to establish trench endpoints .





c. Mark a line 14" inside and outside of the pool outline from trench end to trench end. Trenches are 28" wide.

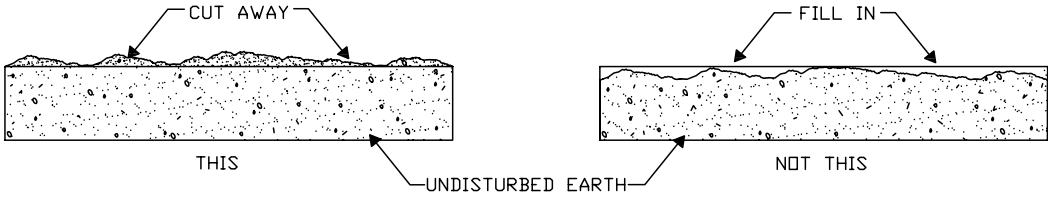


5. Level ground within pool outline, include overdig of 12" at both ends of pool. Keep points H, J and K secure.

6. Dig trench areas 12" below bottom of pool grade

LEVELING THE EXCAVATION

Establish ground level (benchmark) of the pool. 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 excavator had gone too deep. Any voids beneath the wall panels caused by large rock, etc., must be filled and properly compacted.

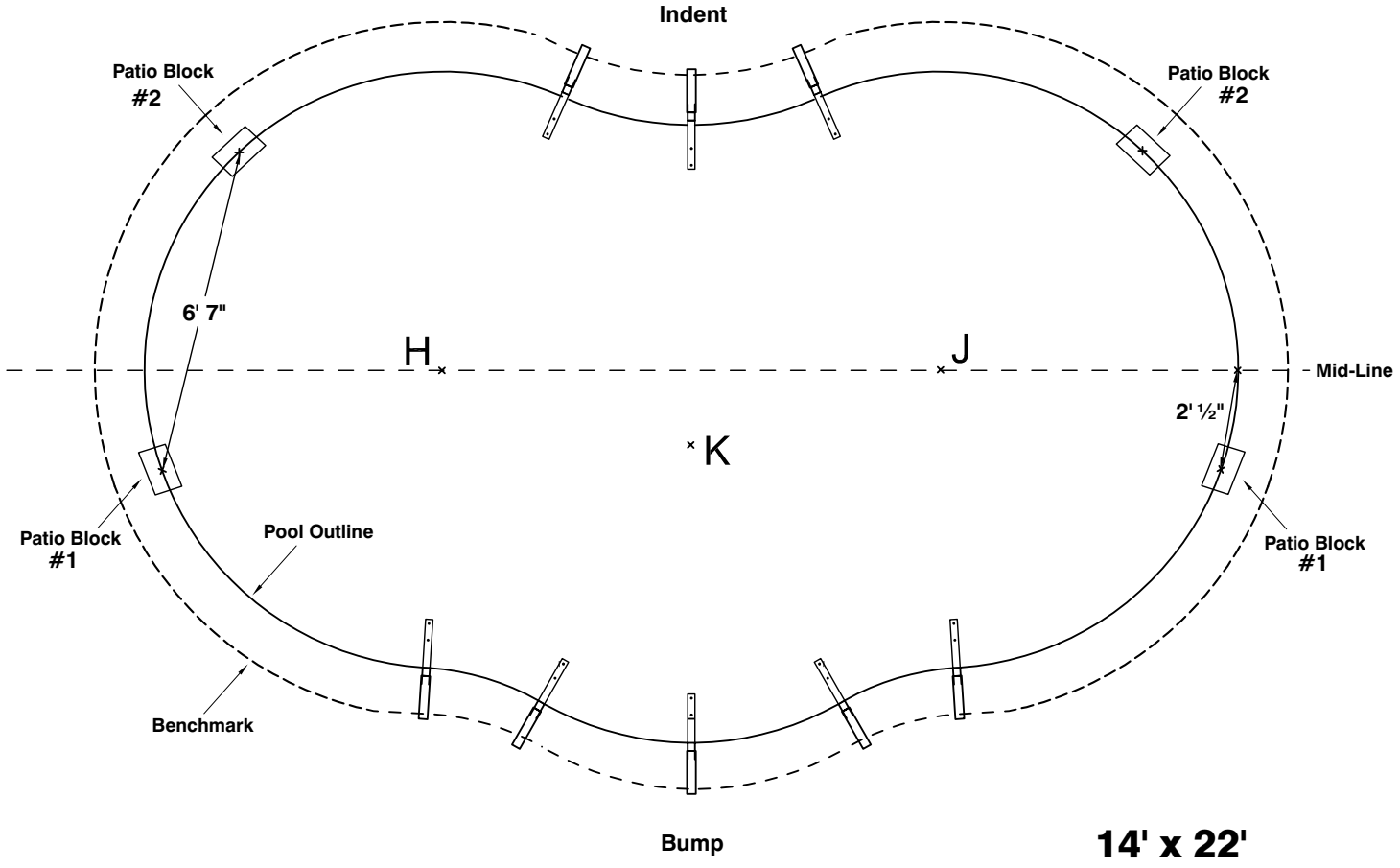


PATIO BLOCK LAYOUTS

14' X 22' LAYOUT

There will be 3 panels and 2 joints to position patio blocks for leveling at each end of pool.

1. Draw a line through H-J to pool outline and mark where they cross. This is the mid-line.
2. From the mid-line, measure and mark a point on the pool outline 2' ½" toward the pool bump. Do this on both ends of the pool. This will be the center of Patio Blocks #1.
3. From the center of Patio Block #1, measure and mark a point on the pool outline 6' 7" toward pool indent. Do this on both ends of the pool. This will be the center of Patio Blocks #2.
4. Top of blocks should be even and level with your pool benchmark.



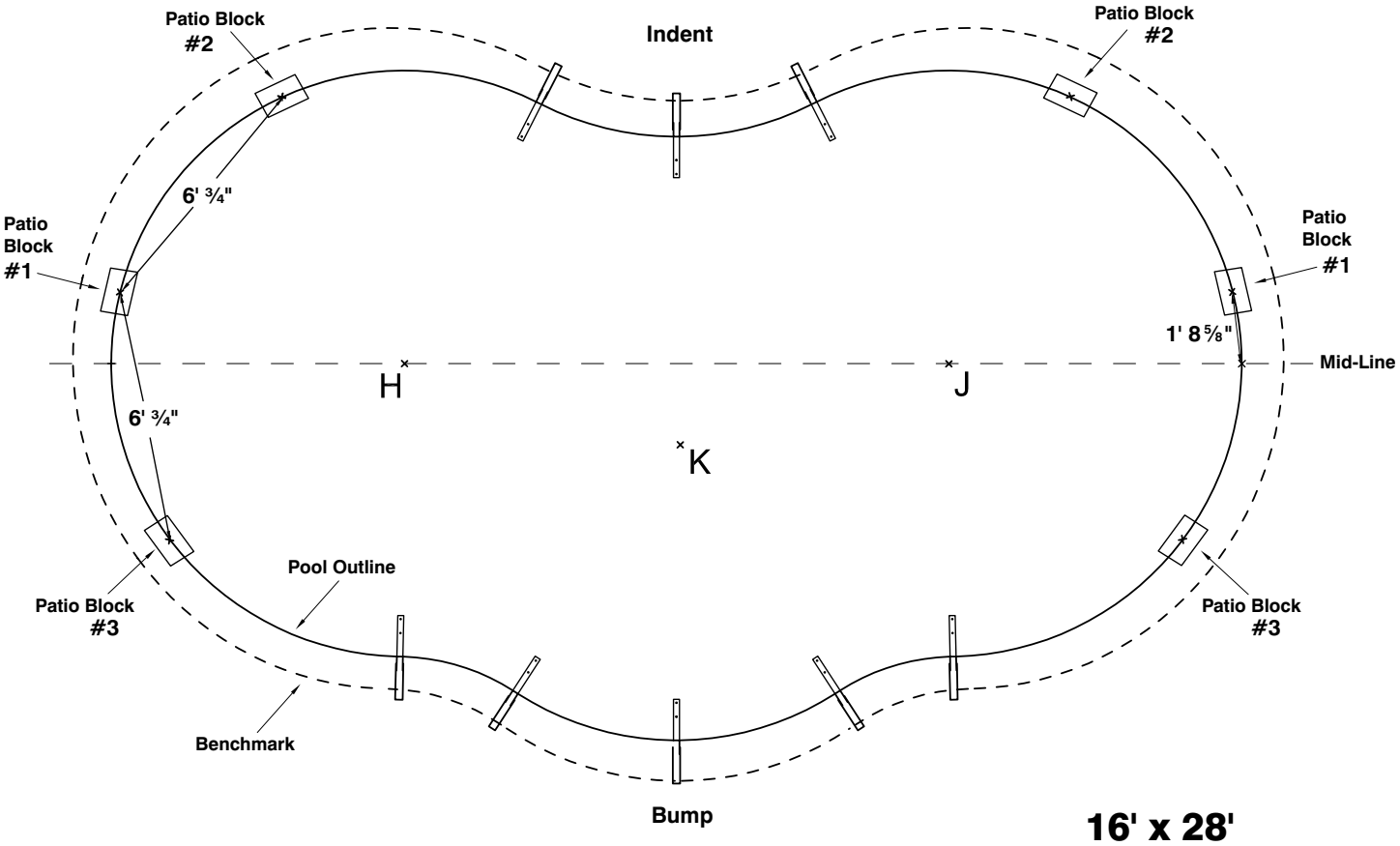
All end panels will join near the center of the patio blocks.

PATIO BLOCK LAYOUTS

16' X 28' LAYOUT

There will be 4 panels and 3 joints to position patio blocks for leveling at each end of pool.

1. Draw a line through H-J to pool outline and mark where they cross. This is the mid-line.
2. From the mid-line, measure and mark a point on the pool outline 1' 8 5/8" toward the pool indent. Do this on both ends of the pool. This will be the center of Patio Blocks #1.
3. From the center of Patio Block #1, measure and mark a point on the pool outline 6' ¾" toward pool indent. Do this on both ends of the pool. This will be the center of Patio Blocks #2.
4. From the center of Patio Block #1, measure and mark a point on the pool outline 6' ¾" toward pool bump. Do this on both ends of the pool. This will be the center of Patio Blocks #3.
5. Top of blocks should be even and level with your pool benchmark.



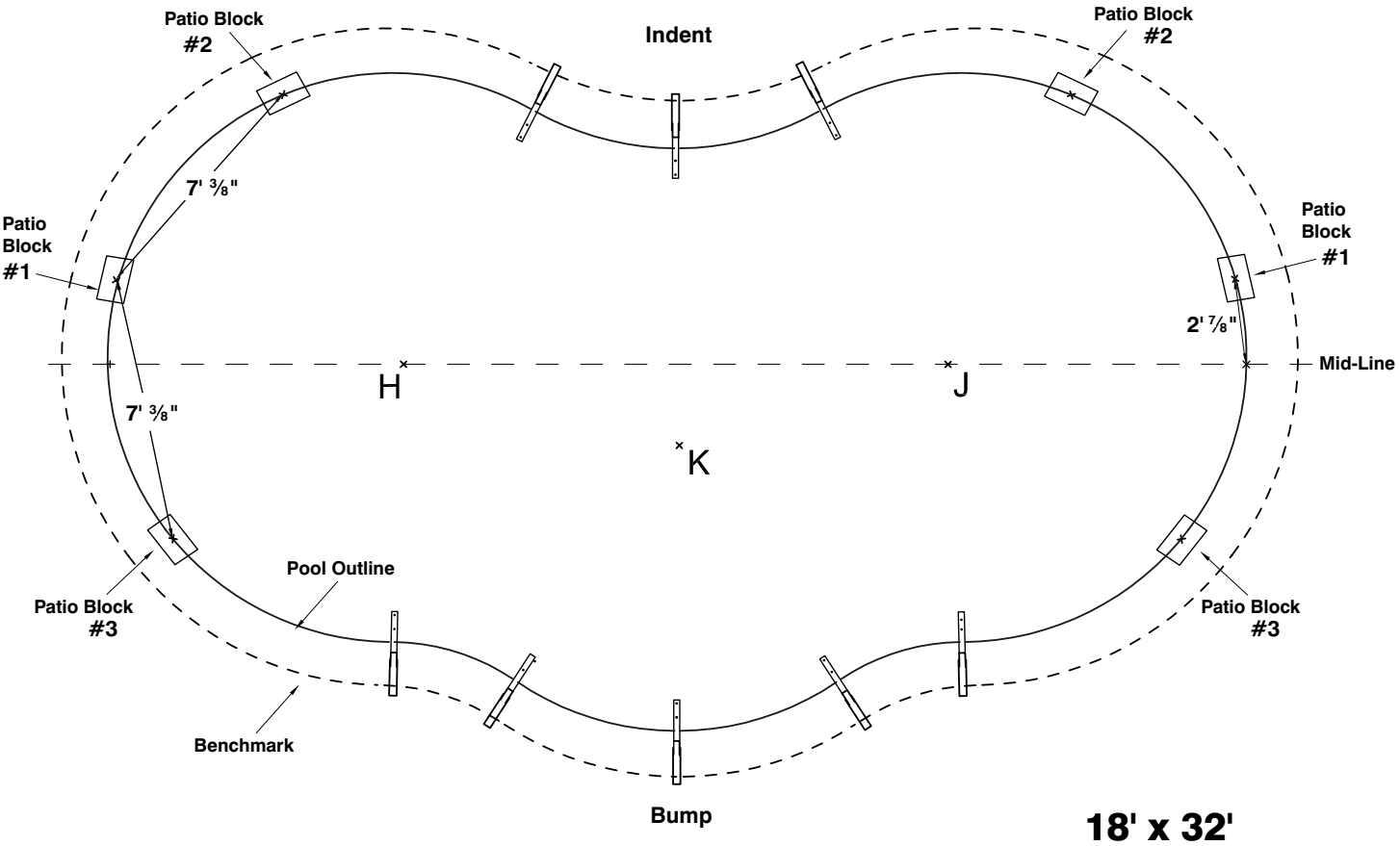
All end panels will join near the center of the patio blocks.

PATIO BLOCK LAYOUTS

18' X 32' LAYOUT

There will be 4 panels and 3 joints to position patio blocks for leveling at each end of pool.

1. Draw a line through H-J to pool outline and mark where they cross. This is the mid-line.
2. From the mid-line, measure and mark a point on the pool outline 2' 7/8" toward the pool indent. Do this on both ends of the pool. This will be the center of Patio Blocks #1.
3. From the center of Patio Block #1, measure and mark a point on the pool outline 7' 3/8" toward pool indent. Do this on both ends of the pool. This will be the center of Patio Blocks #2.
4. From the center of Patio Block #1, measure and mark a point on the pool outline 7' 3/8" toward pool bump. Do this on both ends of the pool. This will be the center of Patio Blocks #3.
5. Top of blocks should be even and level with your pool benchmark.



All end panels will join near the center of the patio blocks.

END PANEL ASSEMBLY

There are 6 equal length panels (3 each end) for the 14' x 22' and 8 equal length panels (4 each end) for the 16' x 28' and 18' x 32'.

IMPORTANT: Locate the wall section that is cut for the installation of both the skimmer and return fitting. The location for this panel should be adjacent to the electrical supply and provide ease of access once the pool is installed.

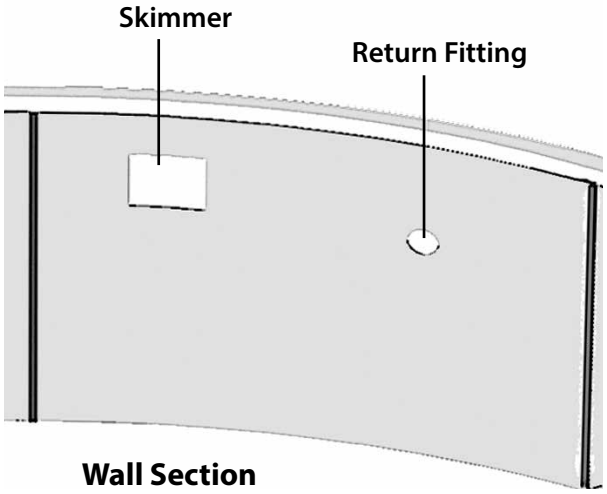
Place an anchor plate centered on a patio block. Place 2 end panels on the anchor plate. Attach the 2 panels with provided splines. Please be aware that each compression seam should be flush before attempting to insert the splines. Splines are designed to slide freely into place when inserted properly into leveled panels. Gently shaking panels can help ease insertion of some splines.

NOTE: Use cooking oil or food spray as lubricant on first 4-6" of splines. Do not use petroleum (WD-40) based lubricants.

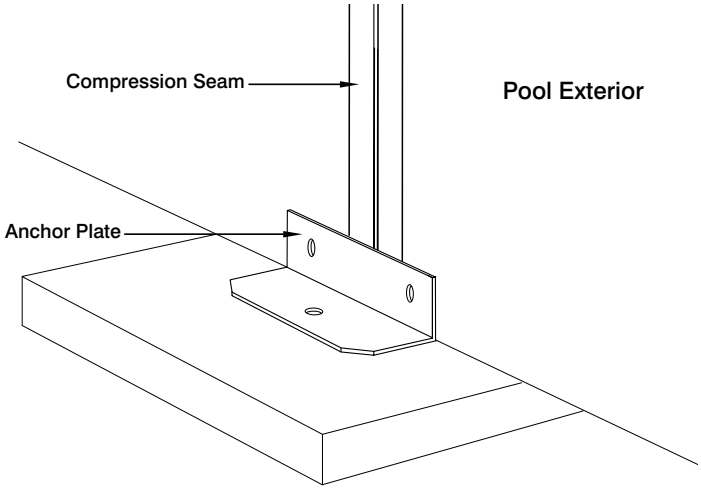
NOTE: Sand for preparing the floor beneath the liner should be placed inside the pool, away from strap locations, before the last end panel is installed.

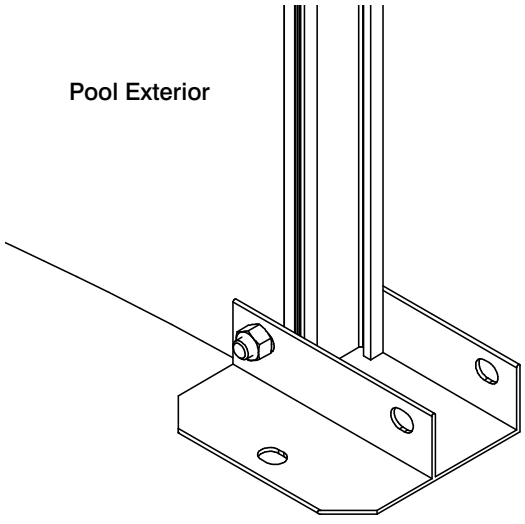
Duplicate this process with the remaining end wall panels, stopping before installing the reverse radius wall panels over the trenches.

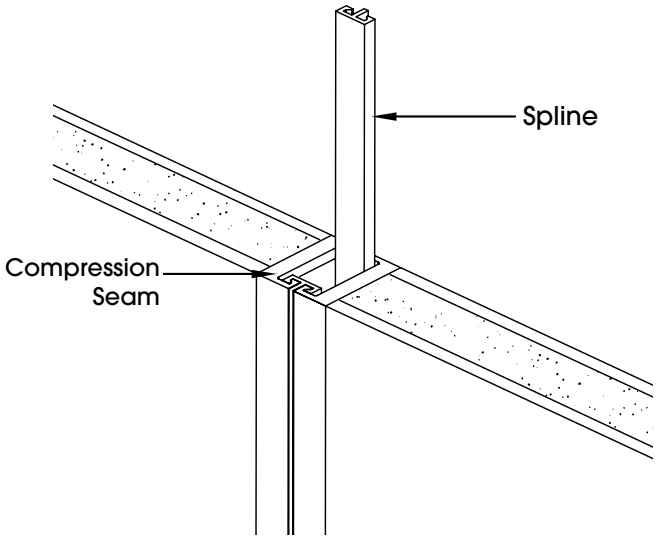
Drill 7/16" holes through the pool panels at the anchor plate predrilled holes. Secure with 2 ½" bolts and nuts. Make sure the panels are securely in the anchor plates and even at the top before drilling.



Wall Section



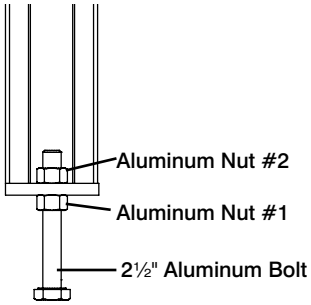




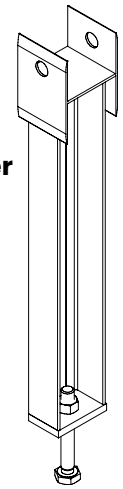
INSTALLATION OF PANELS OVER TRENCH AREAS

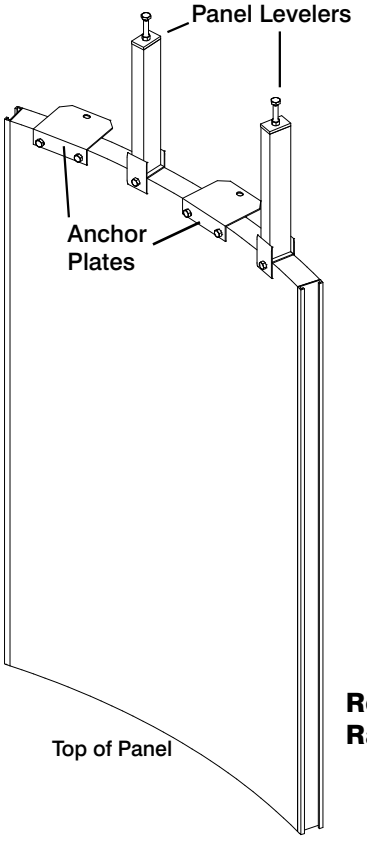
Assemble Panel Levelers:

Assemble panel levelers by threading one of the provided aluminum nuts (#1) onto the 2½" aluminum bolt. Insert bolt in the predrilled hole at the bottom of the leveler and secure with second provided nut (#2)



Panel Leveler



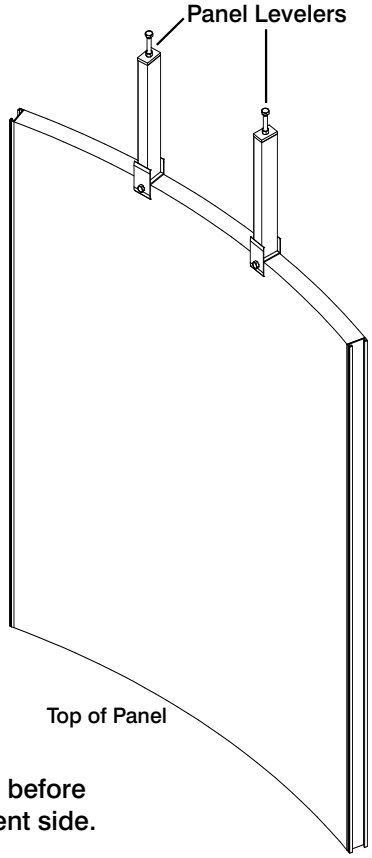


Reverse Radius Panel

Prepare Reverse Radius Panels:

There are 4 reverse radius panels: 2 for bump side and 2 for indent side of pool. Prepare the reverse radius panel by flipping them upside down.

Starting 2" from panel end, alternately space 2 anchor plates and 2 panel levelers on the bottom edge(as shown). Drill 7/16" holes(6) through the walls at the leveler and anchor plate pre-drilled holes, secure with a 2 ½" bolt and nut. Do this for all 4 Reverse Radius panels.



Special Bump Panel

Prepare Special Bump Panels:

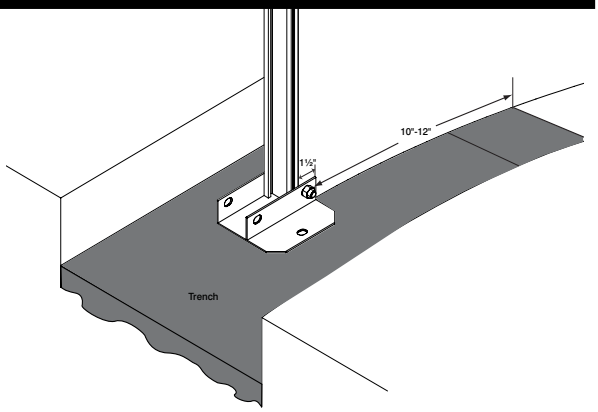
The special bump panels are also flipped upside down. Starting 4" from each panel end, install 2 panel levelers on the bottom edge(as shown). Drill 7/16" holes(2) through the walls at the leveler pre-drilled holes, secure with a 2 ½" bolt and nut. Do this for both Special Bump panels.

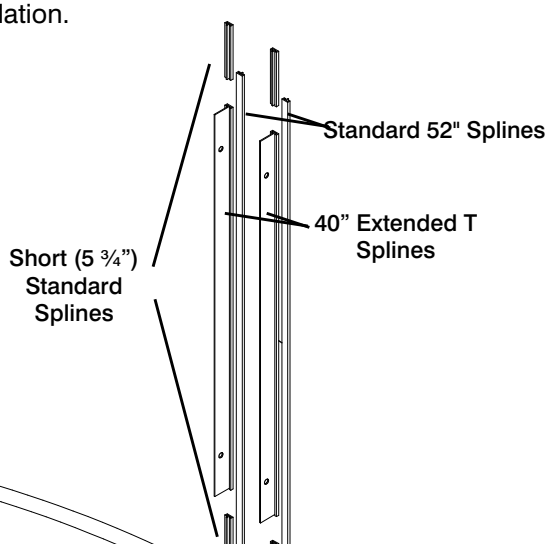
NOTE: Level the trench bottoms as close as possible to 12" below grade before starting. The panel assembly over trench may start on either bump or indent side. Make sure panels are in correct locations, on correct side of the pool.

INSTALLATION OF PANELS OVER TRENCH AREAS

Panel Assembly:

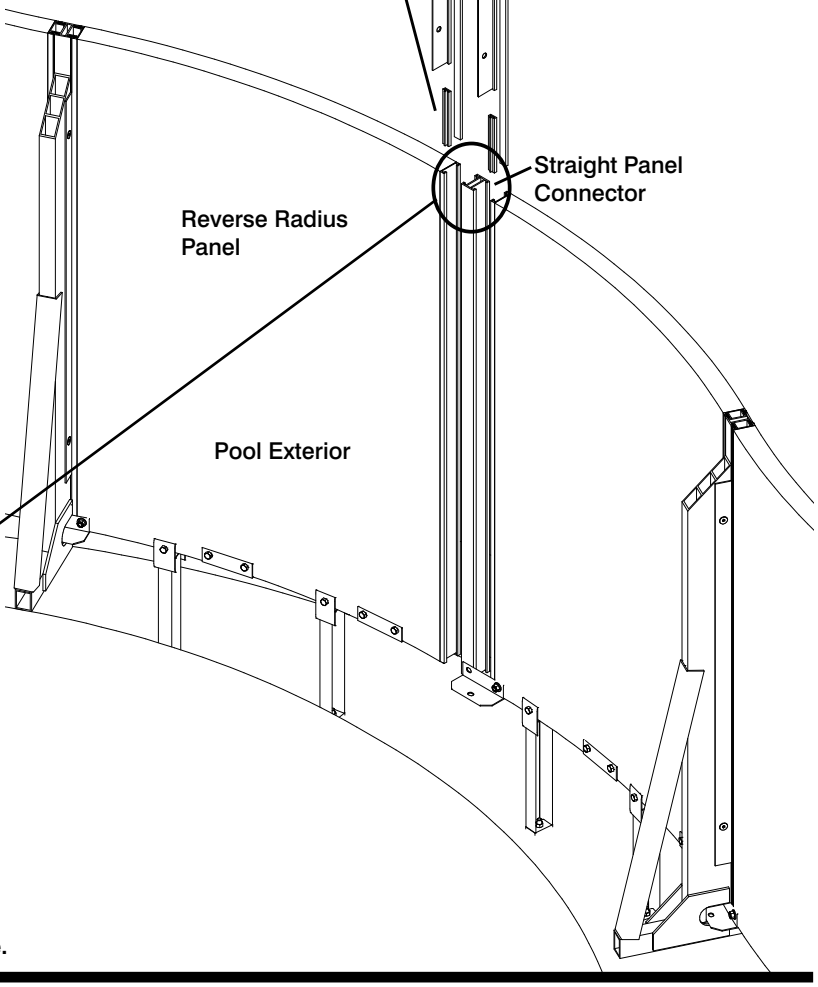
1. Set end panel to overhang trench 10-12”.
2. Place A-frame anchor plate under end of panel in 1 ½”. Drill 7/16” hole through panel at pre-drilled hole in anchor plate. Secure with 2 ½” bolt and nut.
3. Place straight panel connector onto the anchor plate. Secure to panel with a 52” spline on the water side and a short 5 ¾” standard spline, 40” extended (T) spline, and topped with another short 5 ¾” standard spline in the outside groove
4. Identify first reverse panel-bump or indent side and put in place next to straight panel connector just installed. These Panel levelers will help stabilize the panels until the concrete footer installation.
5. Repeat step 3 securing the first reverse panel to the straight panel connector.
6. Repeat step 2 securing the A-frame anchor plate to the first reverse panel.
7. In this step the panel will vary. The bump will use a standard radius panel. The indent will use a reverse radius panel. Repeat step 2, placing an A-frame anchor plate under the end of panel in 1½”. Drill bolt hole and secure anchor plate to panel.

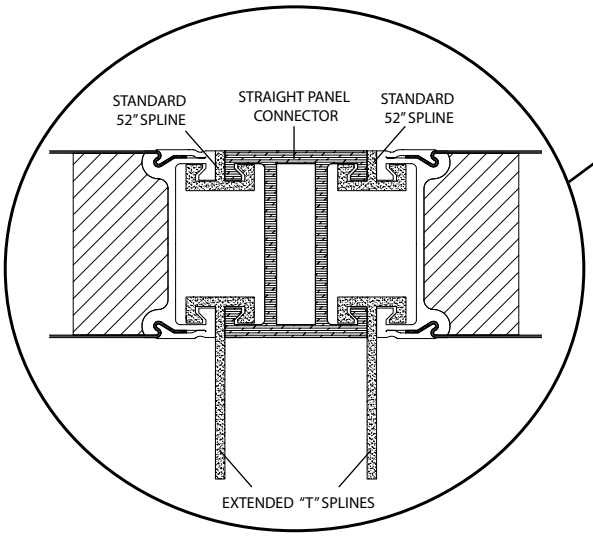




The Indent side will have 2 reverse panels that join with standard end panel at each end of pool. The bump side will have a reverse panel, two special radius bump panels, and the second reverse panel to join with the other end of the pool.

Check level of panels. Adjust panel levelers where necessary.





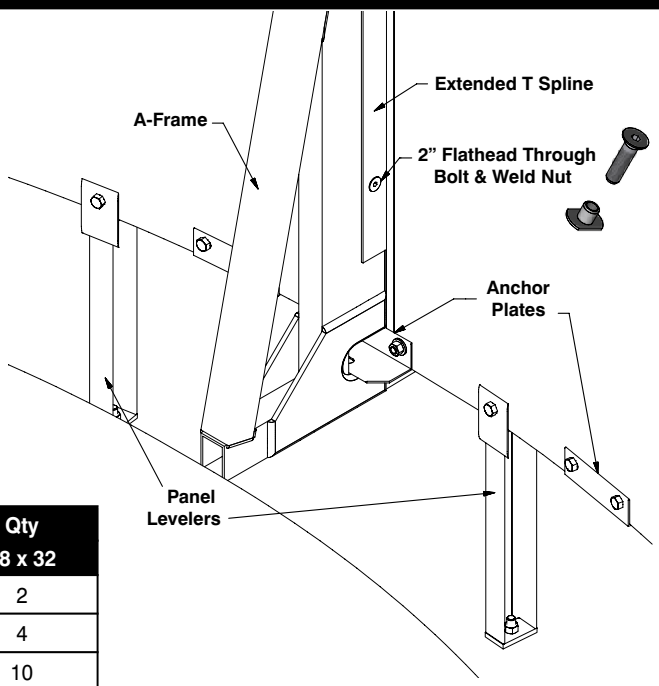
Drawings are for illustrative purposes and are not to scale.

A-FRAME AND STRAP INSTALLATION

There are 8 A-Frames per Freeform pool. The horizontal base of the A-Frame will be under the wall panel and the A-Frame Anchor Plate.

The A-Frame vertical will interlock inside the Extended (T) splines at the wall connections. Secure A-Frame to Extended (T) splines with two (2) 2” flathead through bolts and weld nuts.

Do not over tighten.



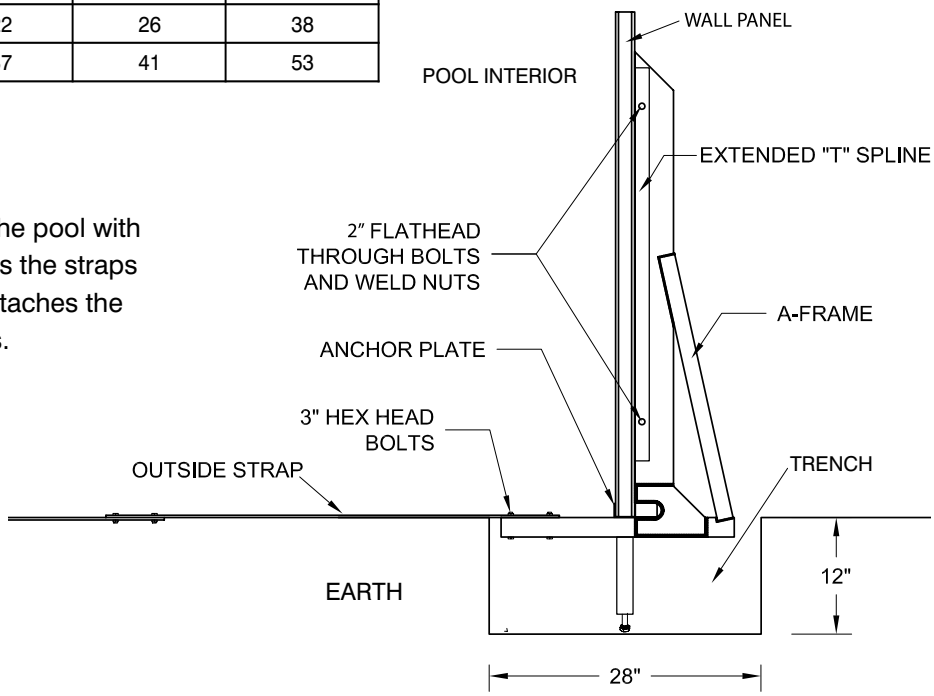
STRAP COMPONENTS CHART

STRAP LABEL	LENGTH	Qty 14 x 22	Qty 16 x 28	Qty 18 x 32
A	64 3/16"	5	5	2
B	59 5/16"			4
C	48 3/8"		5	10
D	32 1/4"			2
E	31 3/8"			6
F	54 11/16"		2	
G	53 1/2"		4	
H	23 1/4"		2	
J	63 13/16"	1		
K	42 3/4"	2		
L	41 7/8"	4		
M	37 3/16"	4		
Hardware				
Washer		74	82	106
3" Bolt	A-Frame to strap	15	15	15
1" Bolt	strap to strap	22	26	38
Nut		37	41	53

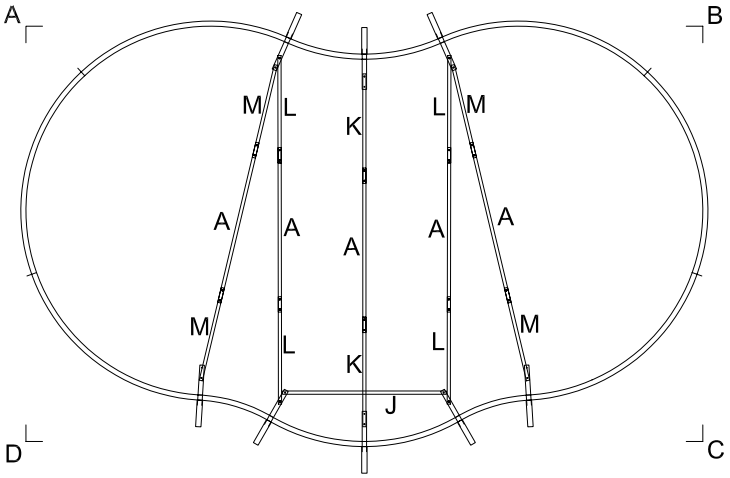
There are 6 different strap sub-kits per pool. Follow strap layout and 3” bolt attachment to A-frame horizontal specifically for the pool being installed.

Note: Refer to Strap chart at right for specific kit components and Strap Diagrams on page 20 for proper layout.

Attach A-Frames to opposite side of the pool with strap kits. A 3” hex head bolt attaches the straps to the A-Frame, a 1” hex head bolt attaches the middle strap below the outside straps.



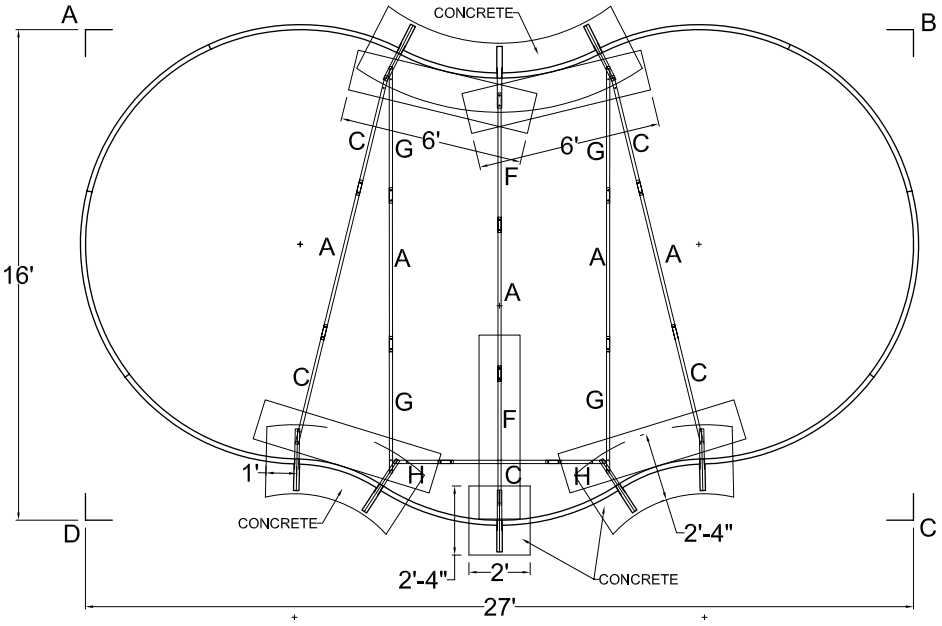
A-FRAME AND STRAP INSTALLATION

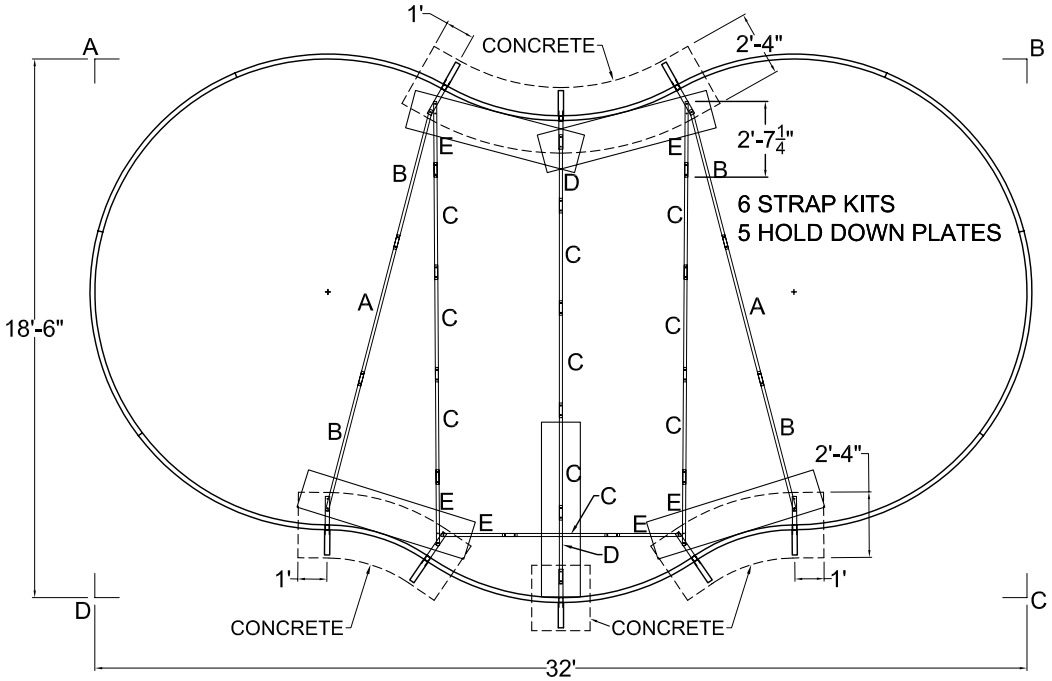


IMPORTANT:
For proper fit, straps must be in correct location at A-Frame horizontals.

14' X 22'

16' X 28'





18' X 32'

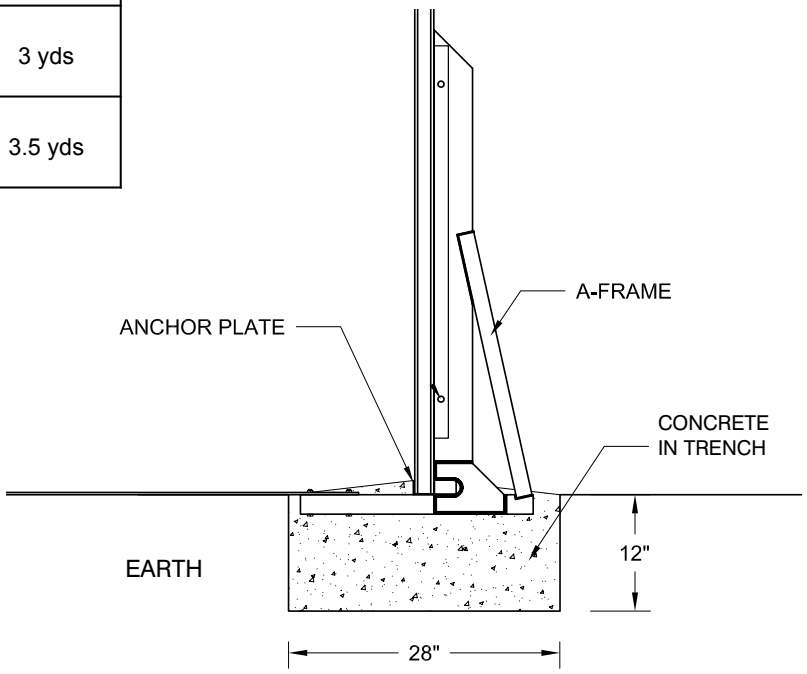
Drawings are for illustrative purposes and are not to scale.

CONCRETE REQUIREMENTS

POOL SIZE	TRENCH AREA	VOLUME	YARDS
14 x 22	1' 2" x 2' 4" x 7'4" 1' 2" x 2' 4" x 11 '6"	19.97 cu ft 31.31 cu ft 51.28 cu ft	2.25 yds
16 x 28	1' 2" x 2' 4" x 9' 1' 2" x 2' 4" x 16' 10"	24.5 cu ft 45.83 cu ft 70.33 cu ft	3 yds
18 x 32	1' 2" x 2' 4" x 10' 6" 1' 2" x 2' 4" x 19' 2"	28.6 cu ft 52.2 cu ft 81.8 cu ft	3.5 yds

USE 2500# SWIM POOL COLLAR MIX.

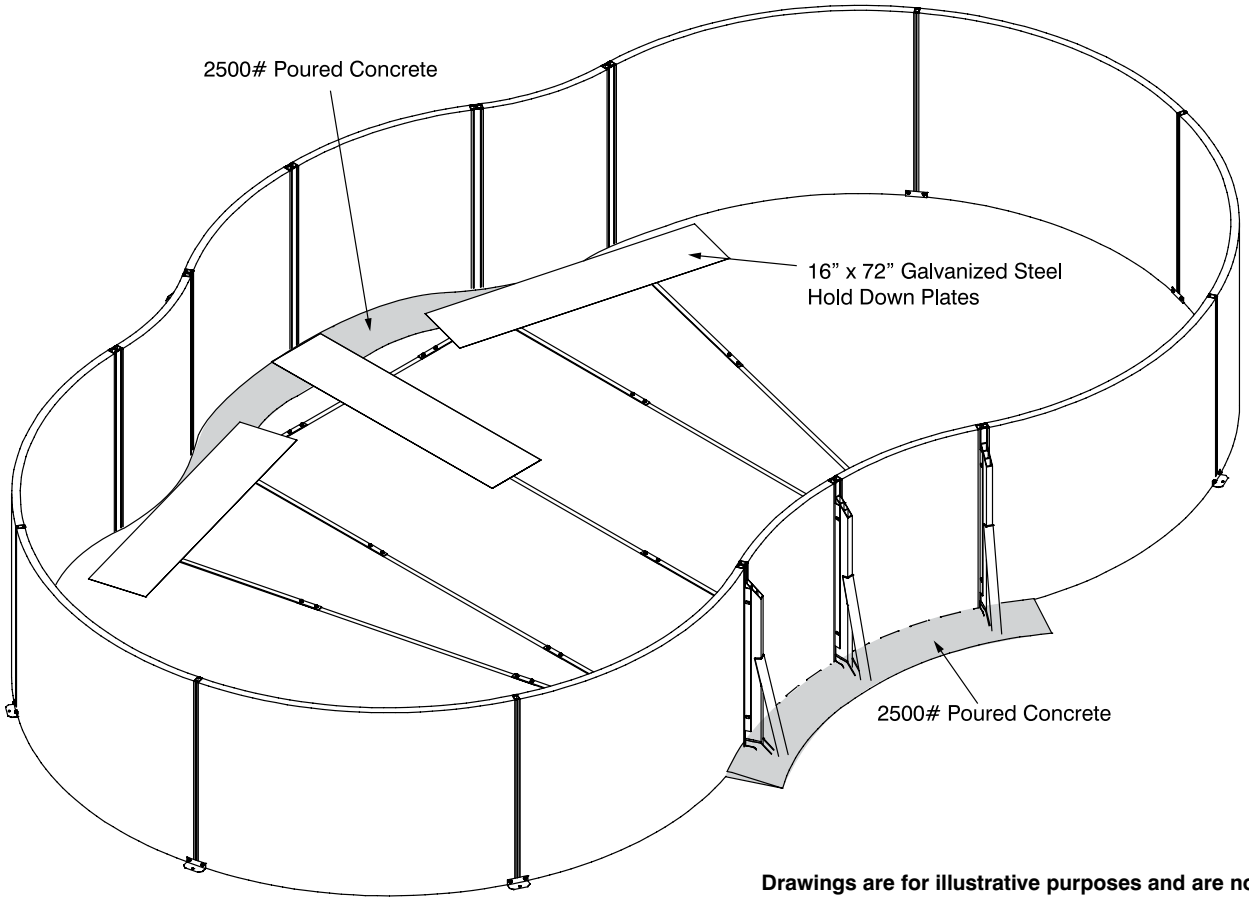
Check level plumb and square of pool one final time before pouring concrete.



Check level plumb and square of pool one final time before pouring concrete.

Trench must be filled to cover A-Frame horizontals and slope up to cover top of anchor plates.

Allow 24 hours to set before installing shrouds and filling pool completely.



Drawings are for illustrative purposes and are not to scale.

INSTALLING SHROUD A-FRAME COVERS

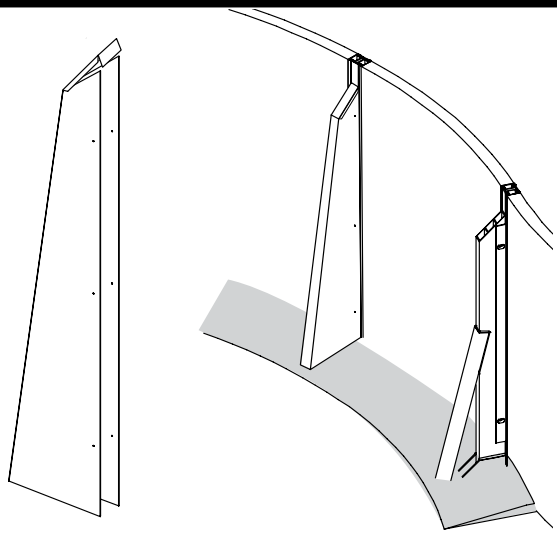
Install A-Frame covers before water is added to pool.

Slip top tab of cover (foam insert inside) between top of A-Frame and the straight wall connector. Settle cover to wall panel (bottom may have to be trimmed to fit concrete poured).

Pre drill holes (6 per A-Frame) into A-Frame using cover holes as guides
(1/8" drill bit). TEK screw (#8 x ½" SS) covers to A-Frames.

Do not over tighten.

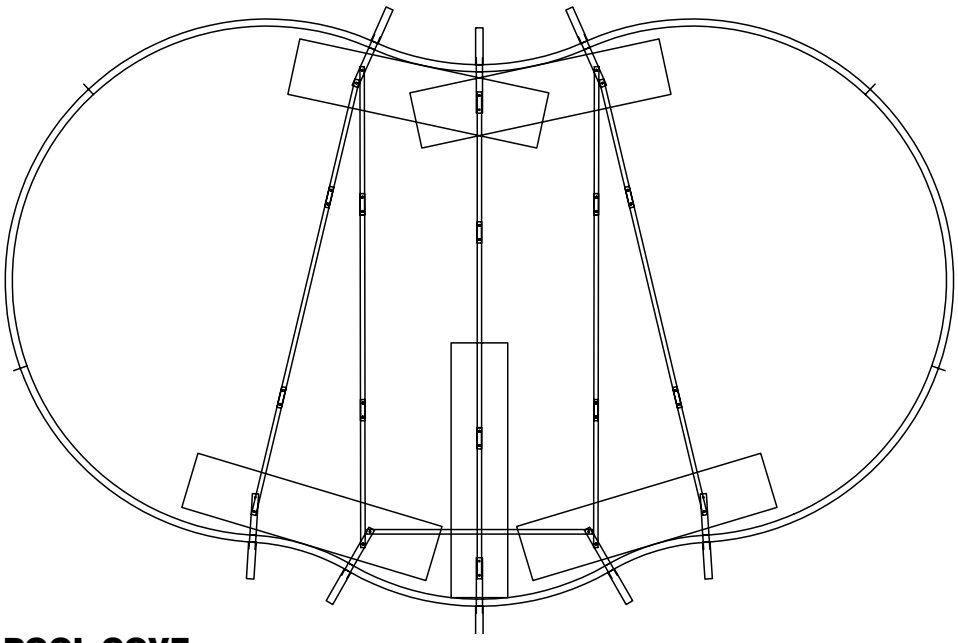
TIP: If top tab does not slip over top of A-Frame, loosen top through bolt. Insert tab and re tighten BOLT.



PREPARING POOL FLOOR AND POOL COVE

The pool interior must be prepared to provide a smooth surface and protection for the vinyl liner. Check inside of pool area for debris, stones, sharp objects, etc. Using the prescribed amount of masonry sand per pool (as shown in the chart below) will provide a 2" layer across the pool floor and a 6" cove up the wall of the pool.

Fill in and tamp soil to top of concrete around the horizontal base support. Place the sand inside the pool area and away from the straps before the last panel is installed. Place the hold down plates over the horizontal base supports. Cover with 2" of sand and cove.



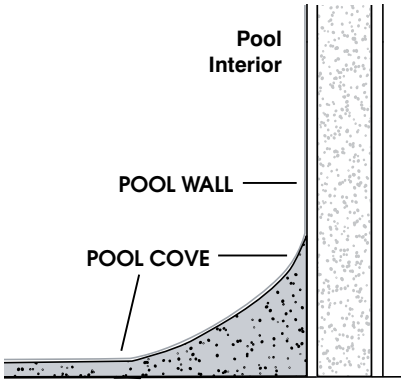
Once the sand has been placed inside the pool, install the remaining wall panel.

Masonry Sand Requirements	
Pool Size	**Amount of Sand**
14' x 22'	2.5 yds
16' x 28'	3.5 yds
18' x 32'	4.5 yds

POOL COVE

Using the masonry sand, build a pool cove 3" to 5" high inside the wall along the entire circumference of the pool. This will prevent the liner from creeping under the wall. **This step is not optional and must be done.**

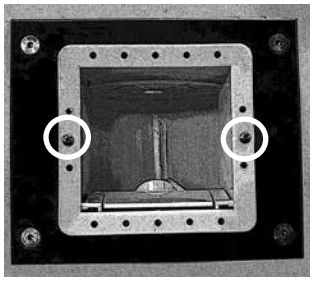
Spread the remaining sand equally across the bottom of the pool. This will give you a 2" to 3" sand base. After the cove and base are in place, rake and tamp the entire pool area. Make sure that no sand is allowed to remain on the wall above the cove. This could cause pinholes in your liner.



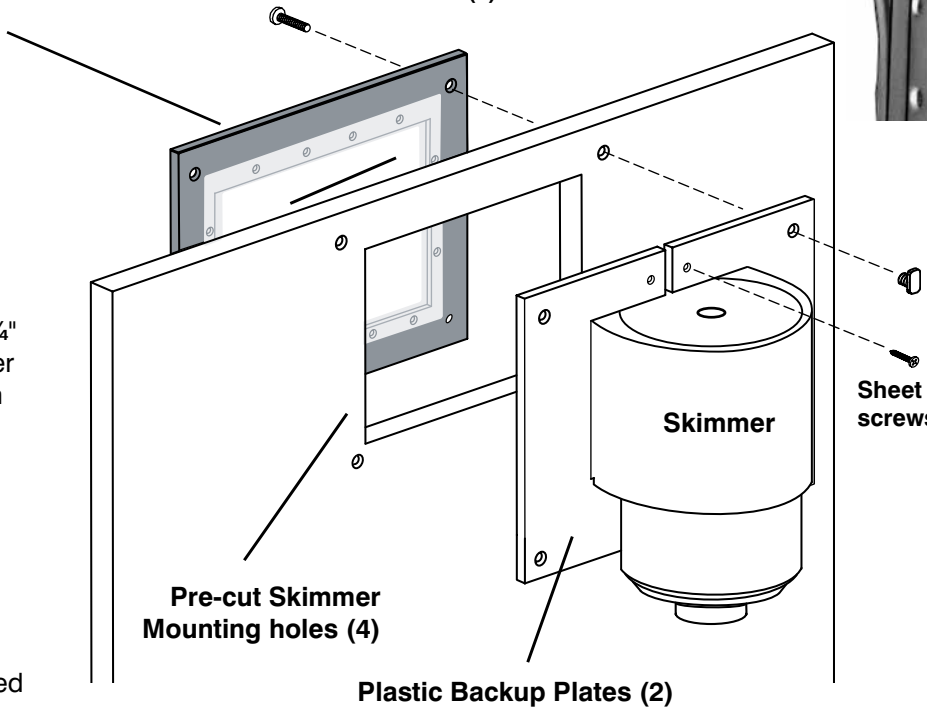
SKIMMER ASSEMBLY

Install rubber gasket on the mounting plate, making sure the gasket straddles both sides of the mounting plate. (as shown at right)

Slide skimmer face through pre-cut skimmer opening, keeping skimmer body on outside of pool wall. Attach gray plastic mounting plate tightly to skimmer face using panhead screws into each side center holes as shown circled below.



Gray Plastic Skimmer Mounting Plate w/gasket (1)



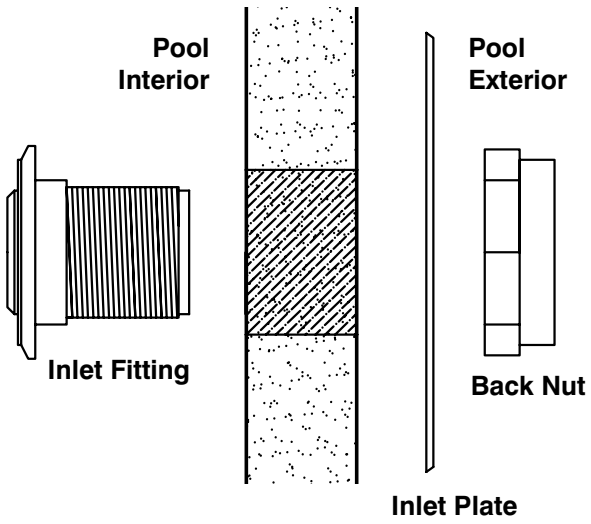
Fasten assembly by inserting 2¼" countersunk bolts through corner holes in mounting plate, through pre-cut holes in pool wall and through corner holes in plastic backup plates securing with T-nuts. **Hand tighten only.** Finish securing backup plates with (4) sheet metal screws per diagram.

The skimmer faceplate is attached after the liner is installed.

RETURN FITTING ASSSEMBLY

The return fitting is comprised of 3 pieces: inlet fitting, inlet plate and back nut.

Install the inlet fitting into the pre-cut hole, slide the inlet plate over the exposed threads and then thread the back nut onto the fitting. **DO NOT OVERTIGHTEN.**



ADDITIONAL RETURN FITTING ASSEMBLY:

An optional second inlet fitting is included with the Metric Oval and Blue Lagoon pool packages. If used: install at opposite end of pool from skimmer.

Drill 3" (3" hole saw) hole 12" down from top of panel. **Note:** 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.**

The Radiant LED light fitting is installed in the same way.

The return faceplates are attached after the liner is installed.

INSTALLING STANDARD PLASTIC COPING

The plastic coping is attached by simply snapping over the pool wall. Each coping joint may be offset from a compression seam. You need to leave a 1" gap between lengths of coping.

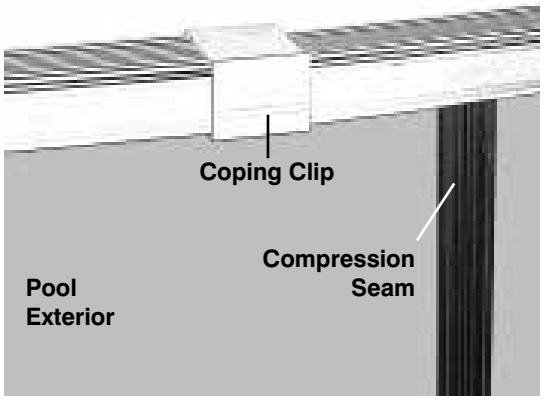
Once all of the coping has been placed, secure the coping to the pool wall with the sheet metal screws provided. **THIS STEP CANNOT BE SKIPPED!** Using a 3/32" drill bit, drill through the plastic coping and **EXTERIOR** pool wall while pressing down firmly on the coping on top of pool wall. Using a Phillips screw driver, hand tighten each screw. **DO NOT OVERTIGHTEN.**

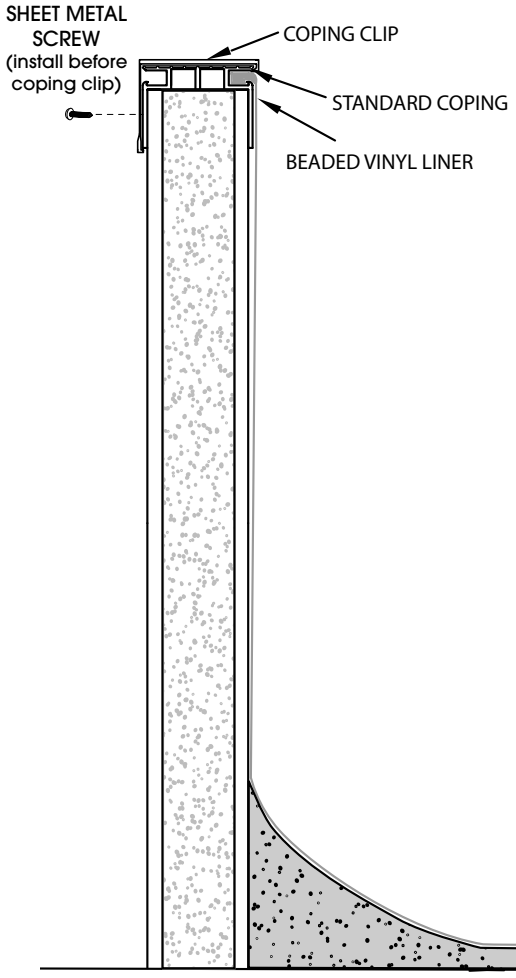
On reverse radius, bump and indent coping sections, you must also secure coping to pool wall INTERIOR with sheet metal screws using the same method as above. See special instructions included in coping box for specific quantities and locations of screws.

Note: Plastic coping on the interior side of the pool wall will be held in place by the weight of the water on the beaded vinyl liner.

IMPORTANT:

There are special instructions in the Metric freeform 2" PVC coping box. There are some cut to fit procedures to be followed. All measurements for coping are taken from the outside or larger radius length.





INSTALLING LINER

Clear all sticks and sharp objects from an area near the pool that is as large as the pool itself. Remove the liner from its carton and unfold and open the liner. Identify the bump and the indent sides of the liner. Refold the liner so that it can easily be carried to the pool and unfold from the outside of the pool. Check to make sure the sand in the pool is level and all bottom supports are sufficiently covered.

Note: Refer to specific pool size drawing for check points to square up liner with pool.

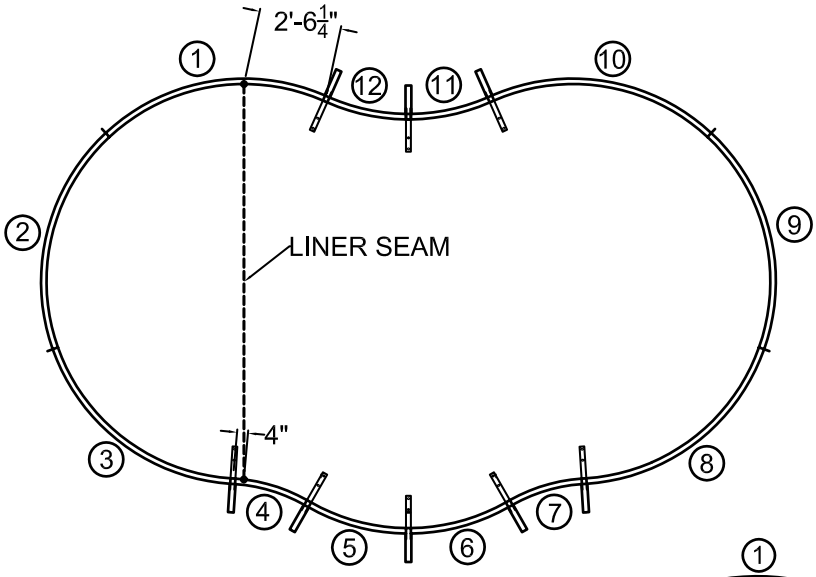
Place the liner into the pool while holding onto the top of the wall section of the liner. Snap the bead of the liner into the bead receiver track in the coping around the entire pool. Gently pull on the liner and use a soft bristle broom to remove as many wrinkles as possible on the bottom of the pool. Start filling the pool slowly with water. Some wrinkling of the liner may be evident and in no way affects the structural strength of your pool. You can continue to work out the wrinkles as needed by pulling gently on the liner or by using a broom.

You can now install coping clips by snapping over gaps between coping lengths.

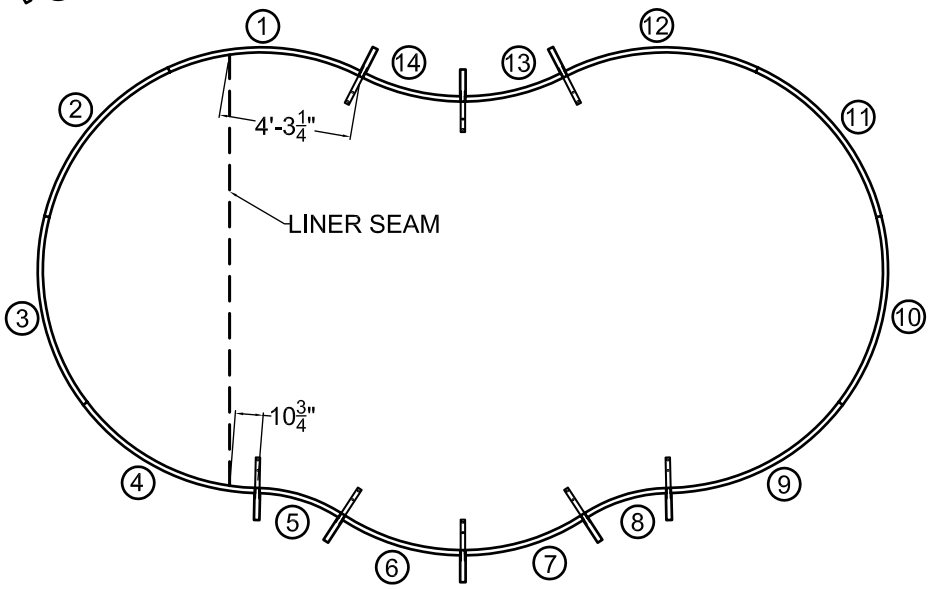
TIP: To remove stubborn wrinkles, a shop vacuum may be used to suck the air out from behind the liner. Before putting water in pool, attach shop vac to skimmer outlet and seal with duct tape. Seal all other openings with duct tape as well. Turn on vac and run till wrinkles are removed. Once the wrinkles are gone, begin filling with water. After a minimum 6" of water is in the pool, turn off and remove the shop vac.

COPING AND LINER GUIDES

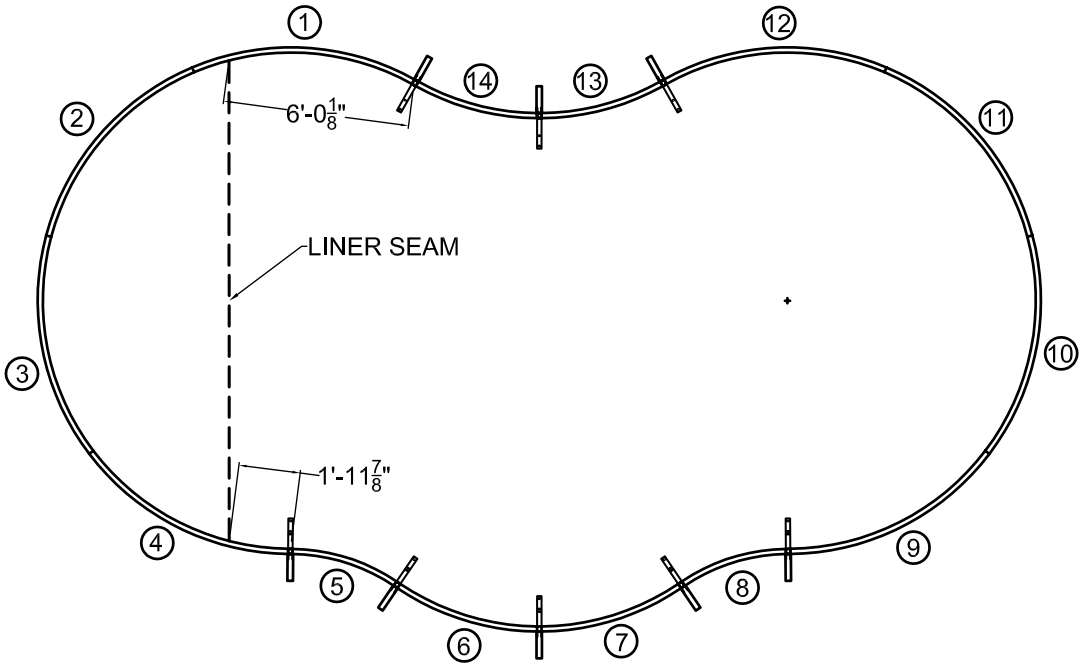
Drawings are for illustrative purposes and are not to scale.



14' X 22'



16' X 28'



18' X 32'

FILLING YOUR POOL

Pool Size	52” Pool Wall (44” of water)
14' x 22'	6480 gal.
16' x 28'	9318 gal.
18' x 32'	12,647 gal.

Water Gallonage per Size

Whether you are filling the pool with your own home water source or through a water-fill service, please use the chart at right to determine the water volume requirements for your particular size pool.

Please see your pool dealer for instructions on proper water testing and balancing.

INSTALLING FACEPLATES

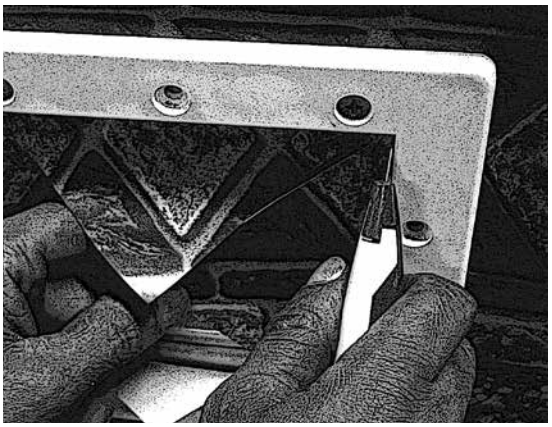
Locate screw holes for faceplate.

Once the liner is installed and the water level reaches 2”-3” from the return and skimmer, install the faceplates.

Locate the screw holes in the mounting plate beneath the liner for the skimmer and the return. Once located, carefully puncture the liner at the screw holes with an icepick or nail. Attach faceplate with 1” screws and hand tighten evenly till snug.

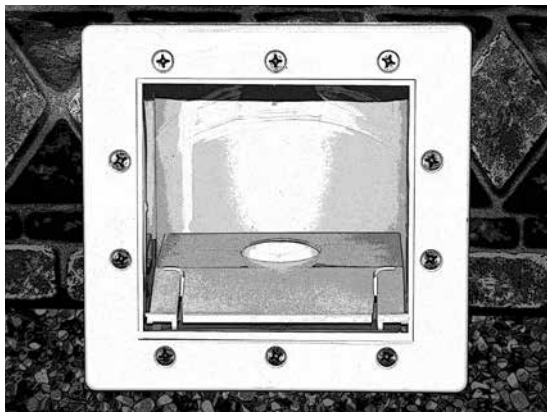
Using a razor knife, carefully trim the liner out of the openings for the skimmer and return. When done, install the directional eyeball into the return.

Trim liner from return opening.



Trim liner from skimmer opening.

Return faceplate installed.



Skimmer faceplate installed.

COMPLETING INSTALLATION

Please refer to the manufacturers’ installation instructions for all other installation components. These include pump, filter, lights, and all other equipment and accessories.

WINTERIZING

Your Radiant Metric Series pool is to be winterized in the same manner as other pools. With a Metric Series Freeform pool, there are some specific steps you should follow:

1. Make sure all ladders, pool cleaners, toys, floats are out of the water and stored.

2. Make sure the water is clean, balanced, free of algae, and winter chemicals are added.

3. Water is to be lowered to just **below the return fitting** to ease the plugging and draining of the hoses, pipes and skimmer.

4. Return Inlet: Remove directional (eyeball) and insert rubber or plastic winterizing plug from the inside of the pool. We recommend a #10 rubber plug or a Hayward SP1022C plug.

5. Make sure the filter and pump pipes, hoses are drained of water. Please follow pump and filter manufacturers' specific instructions for winterizing.

6. Skimmer: Remove basket and weir. Insert gizzmo or styrofoam and/or winterizing plate to prevent ice from forming a solid block that could damage your skimmer. If using a gizzmo, the standard size is recommended for aboveground skimmers. For inground skimmers, the super Gizzmo will work best.

7. Install aboveground winter cover by inserting beading on cover into bead track of your Metric coping. The cover bead track on the standard 2" coping is located on the exterior of the pool. The cover bead on the 4" coping is located on the interior of the pool, above the liner track. Excess cover material should be inside the pool and resting on the water. Add a little water on the cover in windy areas to hold the cover down. No air pillow or flotation is required in the middle of the pool.

8. Check the level of the water under the cover after about one week, a good test for a slow leak in your liner.

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