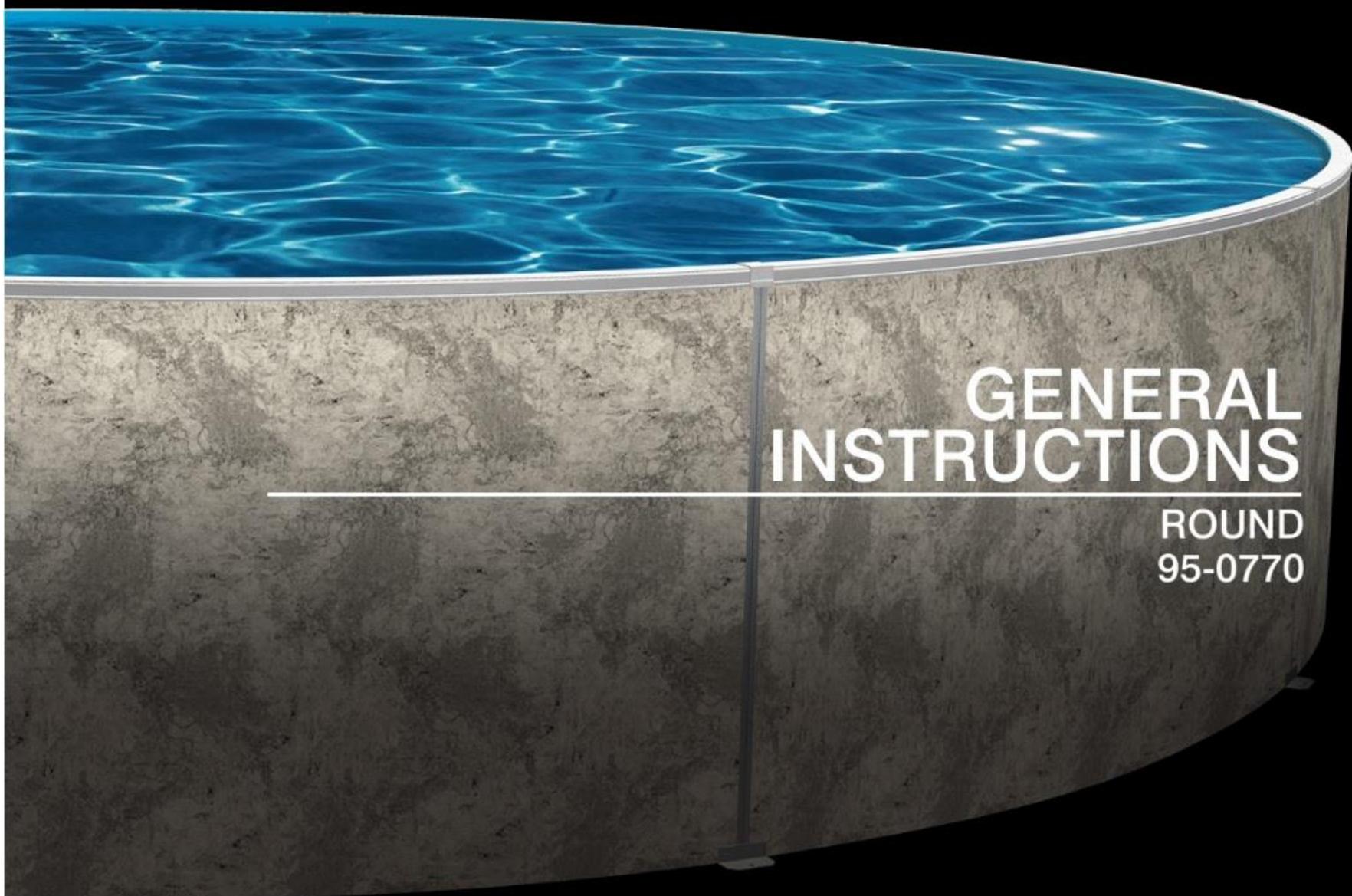




# Optimum Pool

by Wilbar



## GENERAL INSTRUCTIONS

ROUND  
95-0770



# Optimum Pool

In order for your pool warranty to be deemed valid  
you **must** register your pool at

[www.mypoolwarranty.com](http://www.mypoolwarranty.com)



# POOL SAFETY

PLEASE READ PRIOR TO INSTALLATION

## WARNING!

Failure to observe these warnings may result in permanent injury, paralysis from a broken neck, and death due to electrocution or drowning. This pool is NOT designed for diving or jumping. Serious injuries can result from jumping or diving into shallow water! Carefully read, understand and follow all information in this user manual before installing and enjoying your swimming pool. These warnings, instructions and safety guidelines address common risks of water recreation, but they cannot cover all possible risks and dangers in all cases. Always use caution and employ common sense and good judgment when enjoying any water activity.

Your pool contains a large quantity of water, and any amount of water, even shallow water, can present serious dangers to life and health unless these safety rules are strictly observed. First-time users run the highest risk of injury. Ensure all bathers understand these safety rules, and encourage all bathers, especially children, to learn how to swim. Learn basic life support (CPR) and refresh this knowledge regularly. Instruct all bathers, including children, what to do in case of emergency. Keep a working phone and a list of emergency phone numbers near the pool. This can save a life. To ensure your pool is used safely, you MUST observe and enforce the following safety precautions:

### 1. NO JUMPING OR DIVING

The top rail of your pool is not a walkway and must not be used for jumping or diving. Do not permit jumping or diving into the pool from a pool deck, the top rail of the pool, or from any structure outside the pool. Diving or jumping into the pool can result in serious injury.

### 2. NEVER USE THE POOL ALONE

Never permit the pool to be used unless it is attended by at least one person other than the bather. Someone should always be available to lend assistance in an emergency. Designate a competent adult to supervise the pool when in use. Vigilant supervision of weak swimmers and non-swimmers by a competent adult is required at all times. Children under five are at the highest risk of drowning.

### 3. NEVER LEAVE CHILDREN UNATTENDED

Never leave a child alone and unsupervised in or near the pool — not even for a second. There is no substitute for constant adult supervision.

### 4. NO ROUGH PLAY

Do not permit rough playing or roughhousing in and around your pool. Surfaces can become slippery and hazardous when wet.

### 5. LIGHT THE POOL AT NIGHT

If the pool is used after dusk, adequate lighting must be provided. Illumination in the pool area must be sufficient to allow swimmers to clearly judge pool depth and all features in and around the pool. For lighting recommendations, consult your local licensed electrical contractor.

### 6. RESTRICT ACCESS TO THE POOL

Do not leave chairs or other furniture beside the pool that could be used by a child to access the pool. Ladders must be removed whenever the pool is unattended. A fence with a lockable gate around the pool or yard is strongly recommended and may be required by law in some areas. Secure doors and windows, where applicable, to prevent unauthorized access to the swimming pool. Remove all toys from the swimming pool and surrounding area when not in use to avoid attracting children to the pool. Barriers, pool covers, pool alarms or similar safety devices are helpful aids, but they are not substitutes for continuous adult supervision.

### 7. NO ALCOHOL OR DRUGS

Never drink alcoholic beverages or use any intoxicants which could hinder your judgment and reflexes in an emergency.

### 8. KEEP YOUR POOL CLEAN AND SANITARY

Your filter system will remove suspended particles from the water and the surface skimmer will remove insects, leaves and other debris from the water surface. Use the correct pool chemicals as directed to destroy harmful bacteria and prevent formation of algae. Remember, unsanitary water is a serious health hazard.

### 8. KEEP OFF THE TOP LEDGES

Do not walk or stand on the top ledges. They can become slippery and result in serious injury.

### 9. POOL COVER SAFETY

The pool cover (sold separately) must have a tamper-proof locking retainer cable that positions the cover around the pool wall and keeps it securely in place. Never allow anyone, especially small children on the cover. Asphyxiation or drowning could result. Be sure to remove pool cover completely from the water surface before entering the pool. When purchasing any pool cover, please consult a pool professional.

### 11. ELECTRICAL HAZARD

Never touch or attempt to service electrical equipment, including the filter, when your body and/or the ground is wet. Electrocution or permanent injury due to high voltage (120V AC) could result. The pool should be bonded in accordance with Section 680-26 of the National Electrical Code. For further assistance contact your dealer or a local licensed electrician. Do not use pool during electrical or rain storms.

### 12. SAFETY ROPE AND POLE

Keep a safety rope measuring at least 50 feet long (15.24 meters) by 1/4" thick (.635cm) securely attached to a flotation buoy with an outside diameter of 15" (38.1cm) in a prominent, easily accessible area by your pool. Keep a pole not less than 16 feet (4.88m) long with a blunt or hook end available at poolside in case of emergencies. Weak swimmers and non-swimmers should wear personal protection equipment when using the pool.

### 13. POOL CHEMICALS

Store pool chemicals out of the reach of children. Do not place chlorine, chlorine tablets or sticks directly into skimmer, or winterize your pool with liquid chlorine. Damage to the skimmer, pool liner and filter will result. Failure to observe this instruction will void all component warranties. Always follow chemical manufacturer's instructions when storing, handling and dispensing pool chemicals.

### 14. CHECK FOR DAMAGE

Periodically inspect your pool and ladder components for damage and wear. Be sure all screws are in place and tightened according to manufacturer's instructions. Replace all damaged or worn components and tighten all screws before you use the pool, deck or ladders. At first sign of rust, remove and touch up immediately.

### 15. POOL PARTS

Never modify the pool, its components or its accessories, remove hardware, or drill holes in the pool, deck or ladder components unless instructed to do so by the manufacturer. Your pool wall is made of thin, but strong metal, so please use work gloves to protect your hands during installation. Always utilize original manufactured parts for replacement. Failure to do so may void your warranty.

## IMPORTANT NOTICE BEFORE INSTALLATION

### SAFETY STICKERS

The safety stickers must be installed as per the following instructions. Failure to properly install warning labels will void warranty. Failure to mount these safety labels may subject you to substantial liability in case of injury. These warnings are not to be removed under any circumstances. If they become discolored or fall off, please request replacements from the manufacturer, which will be provided free of charge.

### SITE CHOICE AND PREPARATION:

- Site choice and preparation is your responsibility.
- All parts to be handled with care and free of dirt and debris.
- Confirm you have all parts.
- Assure entire framework is level.
- Pool rupture due to improper installation could cause serious property damage.

### FOLLOW ALL SAFETY INSTRUCTIONS

Read and follow all safety instructions packaged with pool, ladder, deck or any other accessory. Additional pool safety publications can be obtained by contacting: The Association of Pool & Spa Professionals ([www.apsp.org](http://www.apsp.org))

Place signs on liner above water line, opposite entry to pool



Place signs on wall next to pool entry



Remember to watch children



## INTRODUCTION

CONGRATULATIONS on becoming the owner of a new above ground swimming pool! This is the instruction packet for installation of your pool. The following are some helpful hints to keep in mind before installing.

- Read through the entire instruction booklet prior to installation so that you can familiarize yourself with everything involved with installing your swimming pool before you begin.
  - **DO NOT ATTEMPT INSTALLATION IN WINDY OR GUSTY WEATHER.** This will make installation more difficult and could damage your pool before it's even completely installed.
  - You will find that steps 1, 2 and 3 will be the most labor intensive and time-consuming steps, although the installation is broken down into many simple steps. Once you have completed the first three steps, you should find that the rest of the installation process moves along much more quickly.
  - Please review all safety material and local code guidelines before beginning your installation. There is a yellow safety envelope packed with your pool. This envelope contains safety material and warning stickers to be placed on your pool. If any of these items are missing, please contact your dealer or the factory to obtain them. The warranty is void if all safety precautions are not followed.
- In the event that you need to make a warranty claim, it is important to know the size and model of your swimming pool in order to expedite the handling of your claim. Please fill in the information below and keep for your records. All of this information can be found on the labels attached to the cartons in which your pool is packed.

NAME OF POOL: \_\_\_\_\_  
SIZE OF POOL: \_\_\_\_\_  
DATE OF PURCHASE: \_\_\_\_\_  
NAME OF POOL WALL: \_\_\_\_\_  
NAME OF LINER: \_\_\_\_\_

## TABLE OF CONTENTS – Pool Construction

### FOOTPRINTS LOCATED ON PAGE 50

#### Section 1

##### OPTIMUM ROUND ABOVE / IN-GROUND

Pool Component Checklist.....	5
Parts per Pool Size .....	8
Tools You Will Need .....	9
Select Pool Location .....	10
Create Foundation .....	11
Patio Blocks Installation .....	12
Wall Panel Installation.....	13
Create Pool Cove .....	15
Skimmer Installation. ....	16
Return Fitting Installation .....	17
Install Top Coping .....	18
Install Concrete Collar .....	21
Install Liner .....	22
Install Top Coping Clips .....	22
Fill with Water .....	23
Install Face Plates .....	23
Backfill.....	24

#### Section 2

##### OPTIMUM ROUND IN-GROUND WITH POLYMER STEP

Pool Component Checklist .....	25
Parts per Pool Size .....	28
Tools You Will Need .....	29
Select Pool Location .....	30
Create Foundation .....	31
Patio Blocks Installation .....	32
Wall Installation .....	33
Step Installation.....	37
Create Pool Cove .....	41
Skimmer Installation .....	41
Return Fitting Installation .....	43
Install Top Rail .....	44
Install Concrete Collar.....	46
Install Liner .....	47
Install Top Rail Clips .....	47
Fill with Water .....	48
Install Face Plates .....	48
Add Backfill.....	49

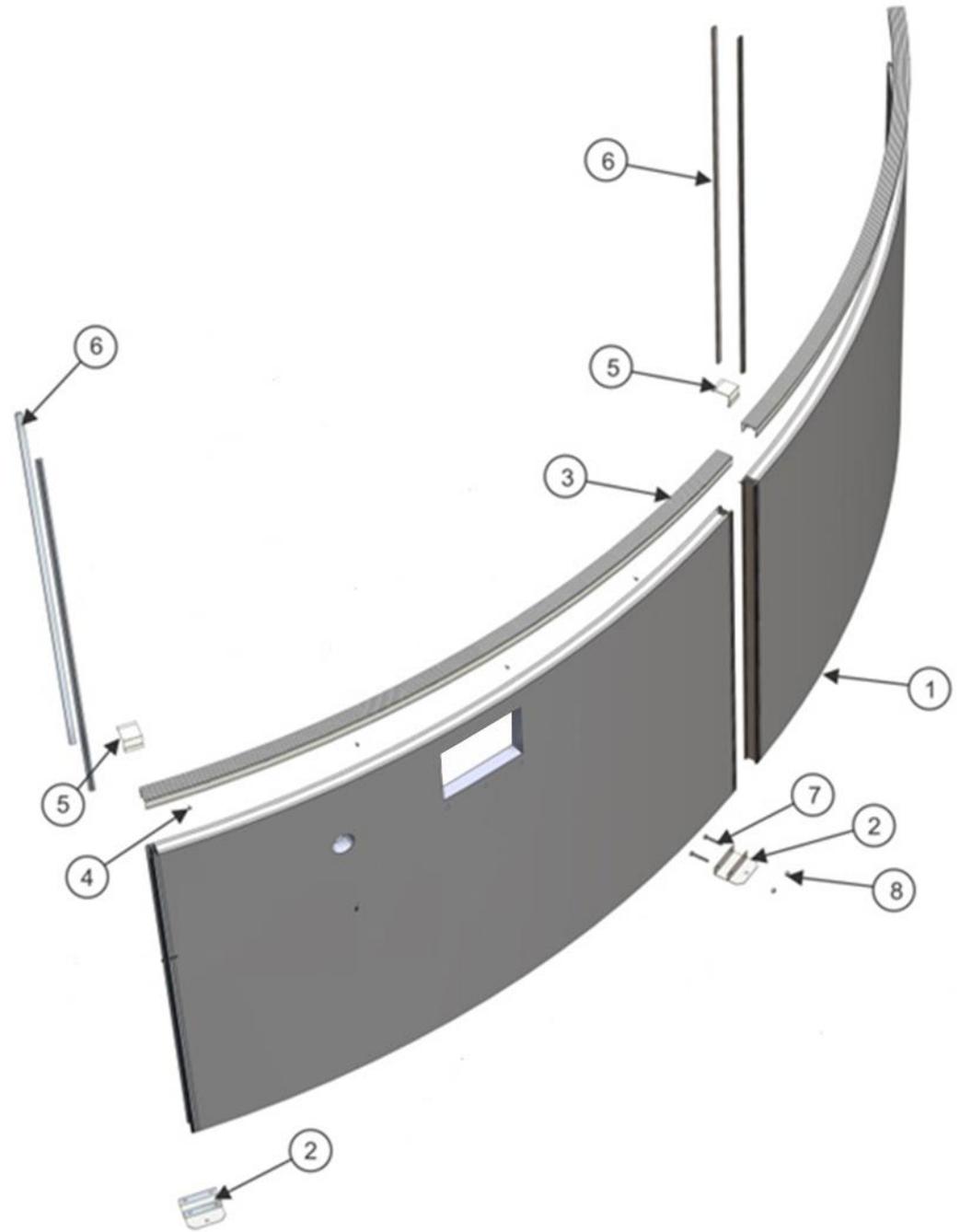
# Section 1

## TABLE OF CONTENTS – Pool Construction

### Pool Components Check List

#### Pool

1	Panels	See Page 8
2	Bottom Plates	#77004
3	PVC Coping 2" Clay	See Page 8
4	Cap Screws - #8 x 1/2"	#99-0138
5	Coping Clip Standard Clay	#77310
6	Splines - 52"	#77002
7	Bolts, Hex Head Alum. - 2 1/2"	#99-0137
8	Nuts, Alum. - 3/8"	#99-0134



# Section 1

## TABLE OF CONTENTS – Pool Construction

### Pool Components Check List: Above Ground Skimmer Panel

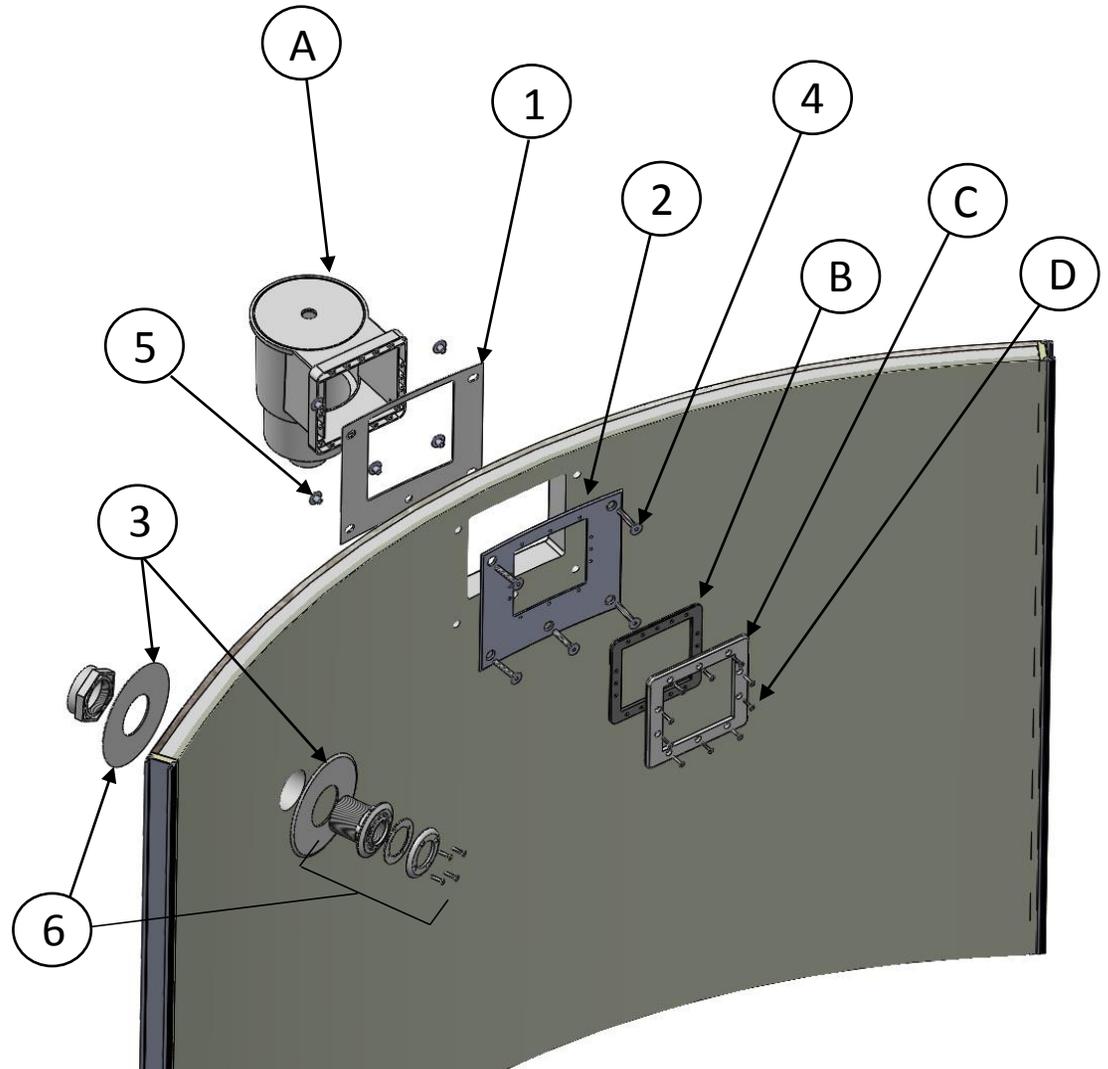
#### Pool

- |                                |          |
|--------------------------------|----------|
| 1. Skimmer Plate SP1091, White | #77516   |
| 2. Skimmer Plate SP1091, Gray  | #77517   |
| 3. White Return Plate          | #77064   |
| 4. Bolts, Countersunk SS- 2 ¼" | #99-0131 |
| 5. Nuts, Flat Head Rivet SS    | #99-0132 |
| 6. Extended Return Fitting Set | #77092   |

#### Skimmer Kit – (NOT INCLUDED)

- For Illustration Purposes Only -

- A. Skimmer
- B. Double Layer Gasket
- C. Skimmer Face Plate
- D. Screws, Flat Head



# Section 1

## TABLE OF CONTENTS – Pool Construction

### Pool Components Check List: In-Ground Skimmer Panel

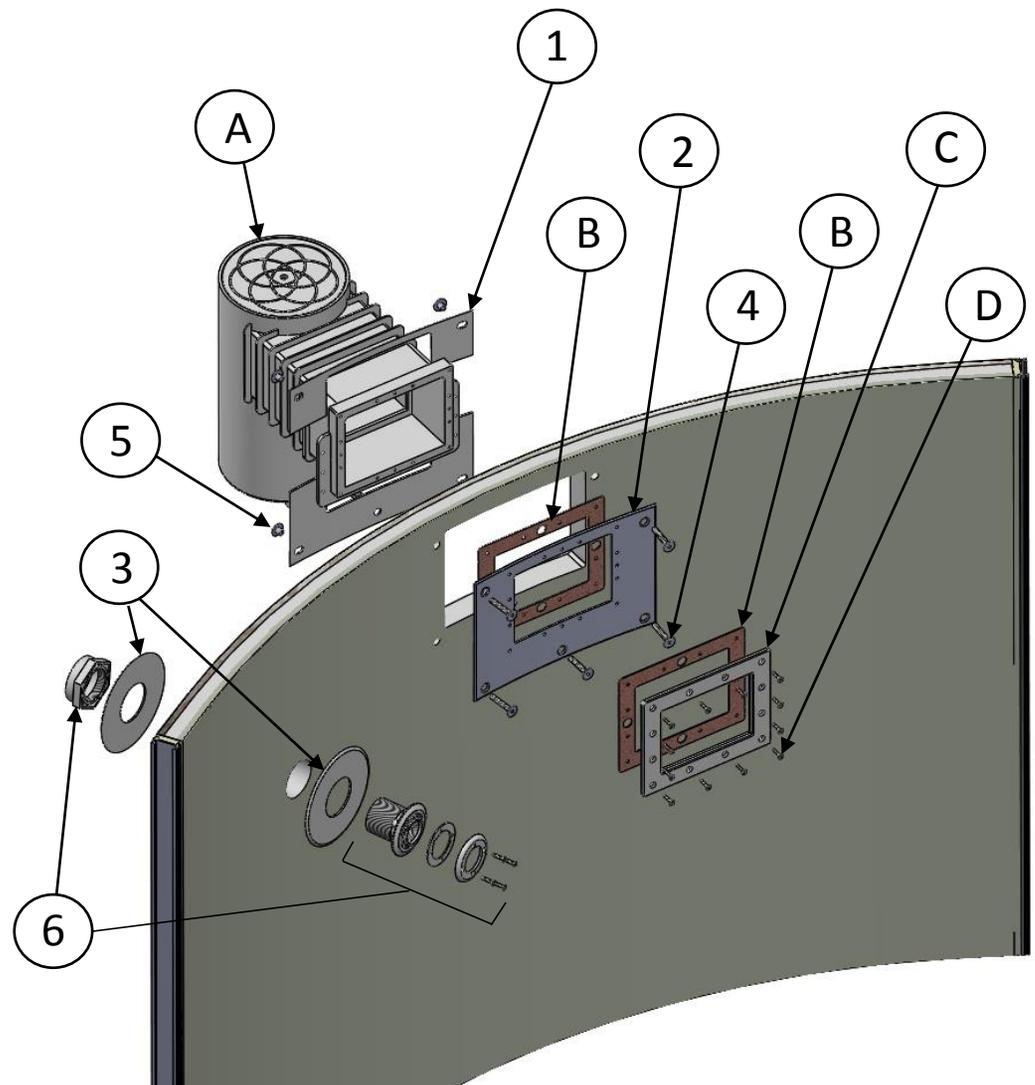
#### Pool

1. Skimmer Plate SP1084, White #77518
2. Skimmer Plate SP1084, Gray #77519
3. White Return Plate #77064
4. Bolts, Countersunk SS- 2 ¼" #99-0131
5. Nuts, Flat Head Rivet SS #99-0132
6. Extended Return Fitting Set #77092

#### Skimmer Kit – (NOT INCLUDED) –

- For Illustration Purposes Only -

- A. Skimmer
- B. Synthetic Gasket
- C. Skimmer Face Plate
- D. Screws, Flat Head



# Section 1

## OPTIMUM ROUND ABOVE / IN-GROUND POOL

### Parts Per Pool Size

PANELS	Part No	12'	14'	16'	18'	21'	24'	27'	30'
OPTIMUM 12FT PANEL, STANDARD 72-1/4"	77319	5							
OPTIMUM 12FT PANEL, IG SKIMMER 72-1/4"	77320	1							
OPTIMUM 12FT PANEL, AG SKIMMER 72-1/4"	77456								
OPTIMUM 14FT PANEL, STANDARD 84-1/4"	77334		5						
OPTIMUM 14FT PANEL, IG SKIMMER 84-1/4"	77335	1							
OPTIMUM 14FT PANEL, AG SKIMMER 84-1/4"	77457								
OPTIMUM 16FT PANEL, STANDARD 73-7/16"	77055			7					
OPTIMUM 16FT PANEL, IG SKIMMER 73-7/16"	77071		1						
OPTIMUM 16FT PANEL, AG SKIMMER 73-7/16"	77458								
OPTIMUM 18FT PANEL, STANDARD 82-3/4"	77056				7				
OPTIMUM 18FT PANEL, IG SKIMMER 82-3/4"	77072			1					
OPTIMUM 18FT PANEL, AG SKIMMER 82-3/4"	77459								
OPTIMUM 21FT PANEL, STANDARD 78"	77129					9			
OPTIMUM 21FT PANEL, IG SKIMMER 78"	77130				1				
OPTIMUM 21FT PANEL, AG SKIMMER 78"	77460								
OPTIMUM 24FT PANEL, STANDARD 89-1/16"	77057						9		
OPTIMUM 24FT PANEL, IG SKIMMER 89-1/16"	77073					1			
OPTIMUM 24FT PANEL, AG SKIMMER 89-1/16"	77461								
OPTIMUM 27FT PANEL, STANDARD 100-1/4"	77058							9	
OPTIMUM 27FT PANEL, IG SKIMMER 100-1/4"	77074						1		
OPTIMUM 27FT PANEL, AG SKIMMER 100-1/4"	77462								
OPTIMUM 30FT PANEL, STANDARD 93-1/16"	77131								11
OPTIMUM 30FT PANEL, IG SKIMMER 93-1/16"	77132								1
OPTIMUM 30FT PANEL, AG SKIMMER 93-1/16"	77463								
TOTAL PANEL COUNT	-	6	6	8	8	10	10	10	12

	Part	Part No	12'	14'	16'	18'	21'	24'	27'	30'
2	BOTTOM PLATE	77004	6	6	8	8	10	10	10	12
3	PVC TOP COPING 2"									
	PVC COPING STANDARD CLAY 12FT 77-1/8"	77309	6							
	PVC COPING STANDARD CLAY 14FT 77-1/8"	77325		6						
	PVC COPING STANDARD CLAY 16FT 77-1/8"	77006			8					
	PVC COPING STANDARD CLAY 18FT 86-5/8"	77007				8				
	PVC COPING STANDARD CLAY 21FT 80-5/16"	77158					10			
	PVC COPING STANDARD CLAY 24FT 91-3/4"	77008						10		
	PVC COPING STANDARD CLAY 27FT 103-1/4"	77009							10	
	PVC COPING STANDARD CLAY 30FT 94-7/8"	77159								12
4	CAP SCREWS- #8 x 1/2"	99-0138	40	40	60	60	60	60	60	75
5	COPING CLIP STANDARD CLAY (REV)	77310	6	6	8	8	10	10	10	12
6	SPLINE - 52"	77002	12	12	16	16	20	20	20	24
7	BOLT, HEX HEAD ALUM. - 2-1/2"	99-0137	12	12	16	16	20	20	20	24
8	NUT, ALUM. - 3/8"	99-0134	12	12	16	16	20	20	20	24
9	SKIMMER REDUCTION INSERT	77070	1	1	1	1	1	1	1	1
10	SKIMMER PLATE SP1091 WHITE (EXTERIOR)	77063	1	1	1	1	1	1	1	1
11	SKIMMER PLATE SP1091 GRAY (INTERIOR)	77061	1	1	1	1	1	1	1	1
12	RETURN PLATE WHITE (EXTERIOR/INTERIOR)	77064	2	2	2	2	2	2	2	2
13	BOLT, COUNTERSUNK SS - 2-1/4"	99-0131	5	5	5	5	5	5	5	5
14	NUT, FLAT HEAD RIVET SS- 3/8"	99-0132	5	5	5	5	5	5	5	5
15	REBAR - 3/8 X 15" (NOT SHOWN)	77001	6	6	8	8	10	10	10	12
16	EXTENDED RETURN FITTING	77092	1	1	1	1	1	1	1	1
17	HEX ALLEN KEY 7/32" (TOOL)	99-0140	1	1	1	1	1	1	1	1

# Section 1

## OPTIMUM ROUND ABOVE / IN-GROUND POOL

### Tools You Will Need:

- |                                  |                               |
|----------------------------------|-------------------------------|
| Tape measure - 100'              | Pliers - channel lock         |
| Marking spray paint or powder    | 9/16" open end wrench         |
| String - 25' length              | Screwdrivers, flat & Phillips |
| Stake or peg – 12"               | Metal file                    |
| Transit, laser level or 3' level | Utility knife                 |
| Rubber mallet                    | PVC pipe cutter               |
| Hacksaw                          | Pool trowel                   |
| Spade                            | Cloth rag                     |
| Square shovel                    | Cooking spray                 |
| Pick                             | Shop vacuum                   |
| Rake                             | Soft bristle broom            |
| Tamper square 10" or 12"         | Extension cord                |
| 2x4, straight - 12'              | Hose with spray nozzle        |
| Square                           | Wheelbarrow                   |
| Power drill                      |                               |
| 7/16" and 1/8" drill bits        |                               |
| 1/4" hex nut driver bit          |                               |
| Socket set                       |                               |
| Duct tape                        |                               |

### Also Needed But Not Included:

**Patio blocks** (2" x 12" x 12")

### In-ground installations:

**Concrete** (when installed more than 24" below grade)

**Backfill** (crushed stone or gravel 3/8" – 3/4" diameter)

**Perforated drain pipe** (for drainage if the site floods easily)

Pool Size	Masonry Sand Cubic Yards	Patio Blocks	Concrete Cubic Yards (If Installing +24" Below Grade)
12'	0.8	6	1
14'	1.1	6	1-1/4
16'	1.5	8	1-1/2
18'	1.9	8	1-3/4
21'	2.5	10	2
24'	3.2	10	2-1/4
27'	4.1	10	2-1/2
30'	5.0	12	2-3/4

# Section 1

## OPTIMUM ROUND ABOVE / IN-GROUND POOL

### Step 1 – Select a Pool Location

#### DO NOT locate the pool:

- over underground lines (electrical, sewage, plumbing, gas).
- over septic tanks.
- under overhead electrical lines.
- near hazardous structures.
- out of compliance with local code restrictions.

#### DO NOT locate the pool on a site:

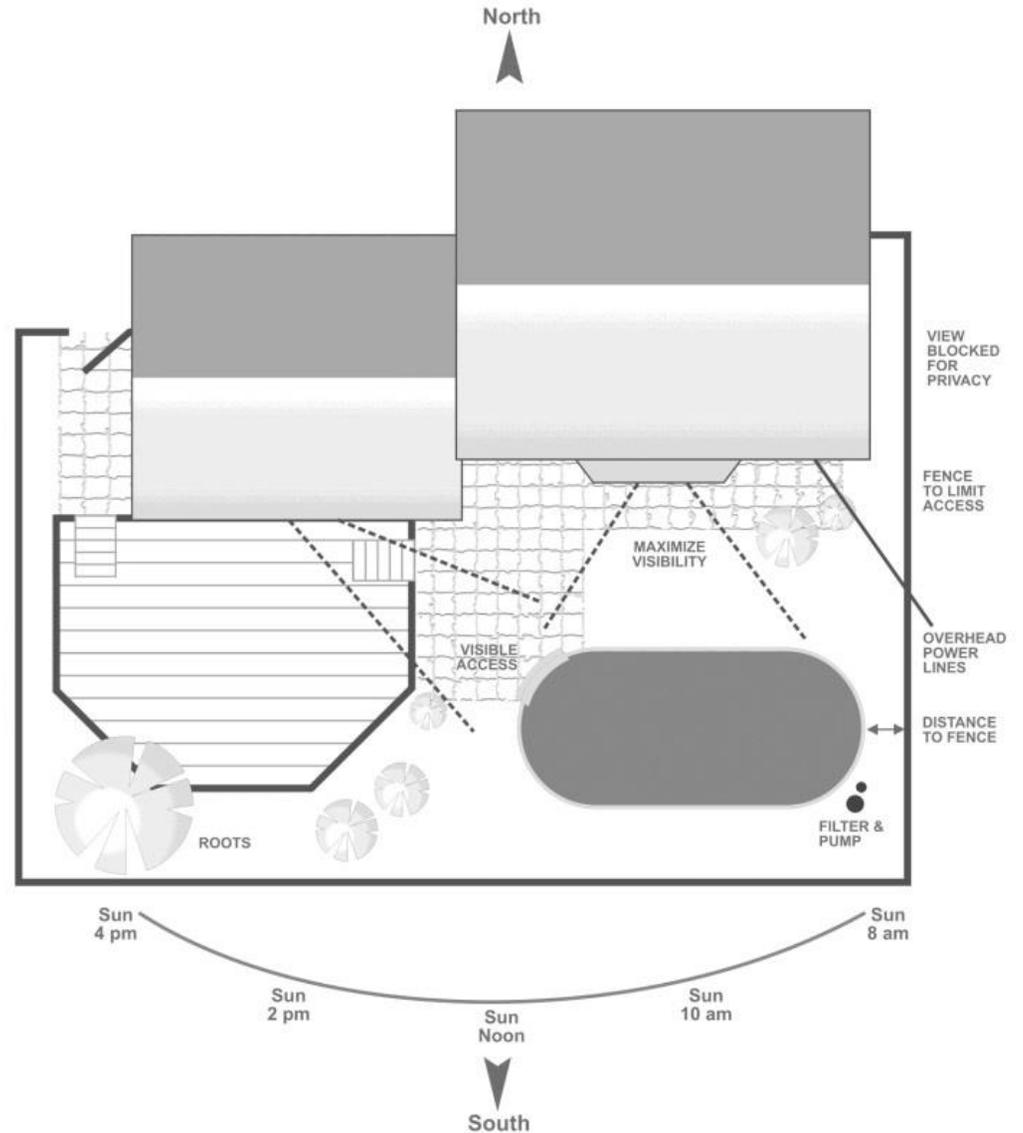
- that is hilly - avoid areas with sudden slopes within 6' of pool
- that has poor drainage or tends to flood.
- in areas with sharp objects.
- on ground that has been treated with weed killer, pesticides or other chemicals.
- that has nut grass, Bermuda grass or bamboo grass growing nearby, as they can grow through your liner and puncture it.

#### DO NOT assemble you pool:

- on asphalt, tar or oil-based surfaces.
- with components such as filters, pumps, and heaters placed where they can be used to access the pool by young children.

#### DO ensure:

- the area selected has a level and firm base.
- surface is flat 2' beyond pool diameter.
- access is available to electrical and water supplies.
- the pool is installed far from structures which could encourage dangerous activities, like jumping from a roof or playset.
- you are aware of your local codes and restrictions.



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 2 – Create a Foundation

- 2.1 Establish the pool circumference by driving a stake into the ground at the center of the site.

Attach one end of a string to the center stake, measure the string out to equal the pool radius, plus an additional 12 inches for clearance. Holding the string taut, walk the circle of the planned outer perimeter of your marking the circle with spray paint, a lawn edger or white powder.

Remove all sod, weeds and other growth from within the circle. Dig to the depth the pool will be installed for below-grade installations. Find the lowest spot within the pool area and level the surrounding ground to that lowest spot with shovel, rake or pick. Dig higher areas down to this level. **DO NOT** add dirt to raise the low areas, as the weight of the filled pool will cause settling.

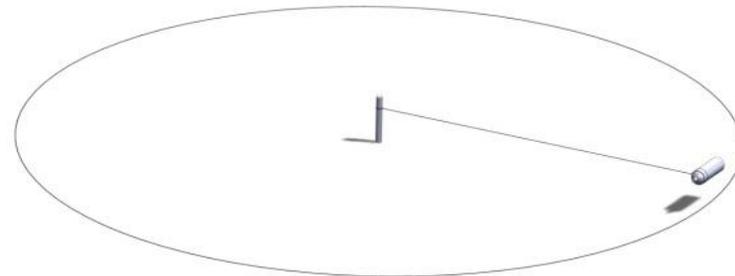
**NOTE:** The pool floor may be dug deeper, sloping to the center of the pool for use with an expandable liner.

Remove protruding roots, stones and other sharp objects that could damage the pool. Tamp down ground with square tamper.

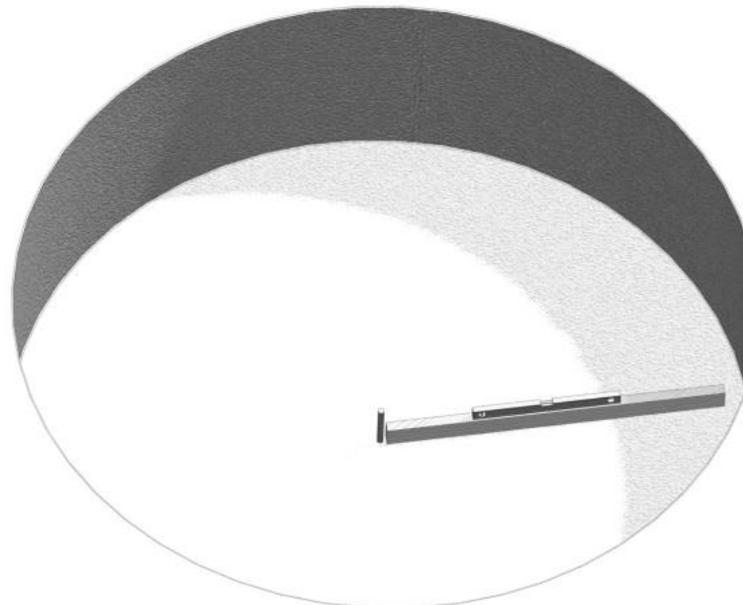
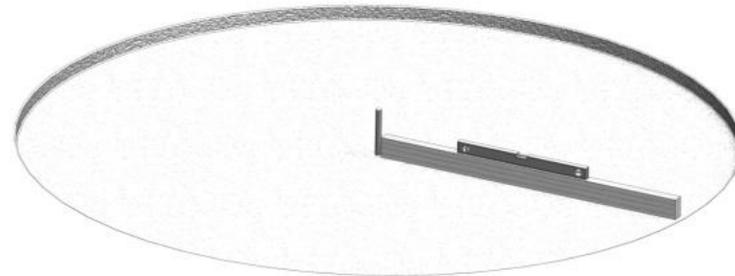
**IN-GROUND INSTALLATIONS: It is recommended that the top of the pool be 2" - 6" above the surrounding area.**

- 2.2 Confirm the site is level and flat using a long straight board or 2x4 and a carpenter's level or transit. Continue to remove high areas of ground if needed.

2.1



2.2



# Section 1

## OPTIMUM ROUND ABOVE / IN-GROUND POOL

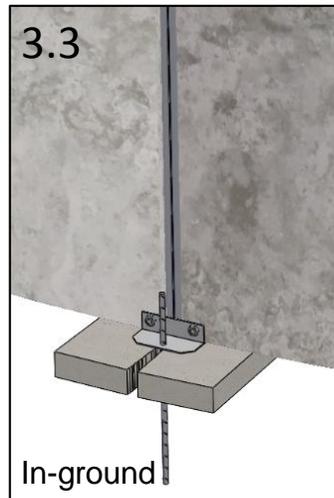
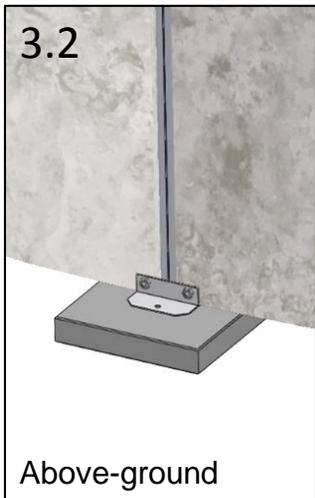
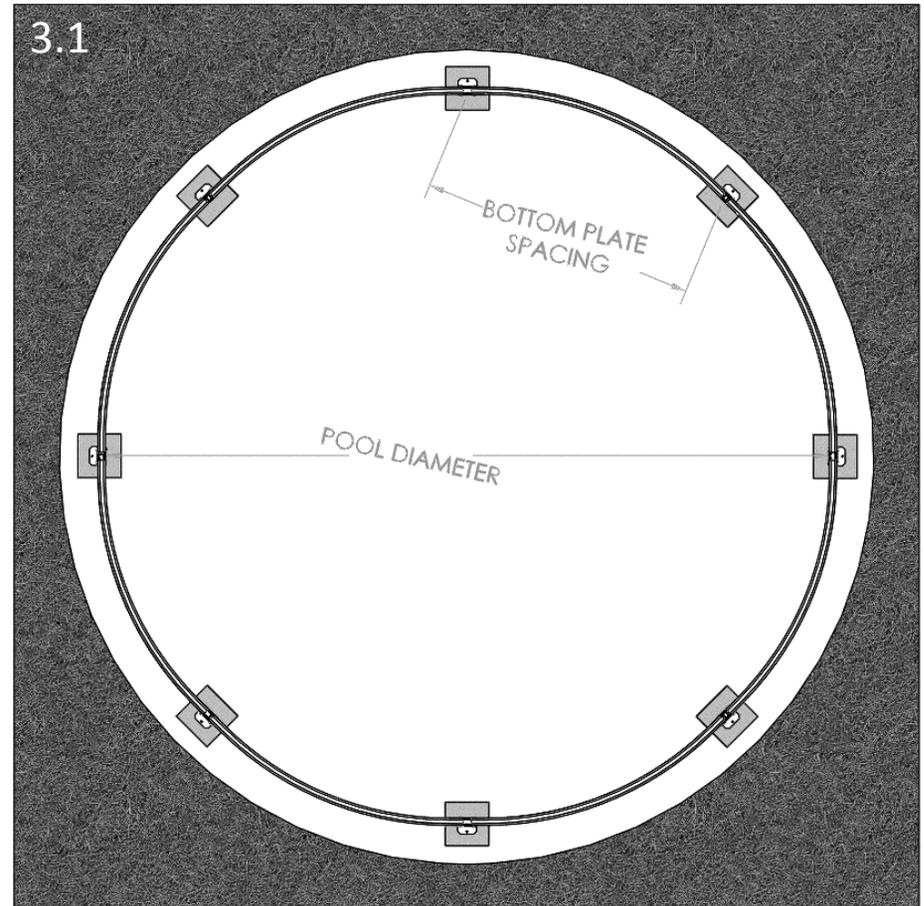
### Step 3 – Install Patio Blocks

3.1 Mark exact pool radius using the center stake.

Using the chart on this page, mark the locations of the patio blocks. Sink a patio block flush with the ground at each mark. All patio blocks must be flush and level with the ground, and level with each other in all directions. This can be confirmed using a 2x4 and level or transit.

**IN-GROUND INSTALLATIONS:** Split the patio block into two halves to allow rebar to be installed later as seen in figure 3.3.

Panel joints will be located over each patio block. Place an Anchor Plate (#77004) on top of each patio block.



Pool Size	12'	14'	16'	18'	21'	24'	27'	30'
Patio Block Spacing	72-1/16"	84"	73-1/2"	82-5/8"	77-7/8"	89"	100-1/8"	93-3/16"
Reference Angle Between Markings	60 Deg	60 Deg	45 Deg	45 Deg	36 Deg	36 Deg	36 Deg	30 Deg

## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 4 – Wall Installation

- 4.1 Decide where the Skimmer Panel and plumbing will be located and place the Skimmer Panel accordingly. The Anchor Plates should be centered on each end of the panel.

Place the next panel symmetrically centered into the Anchor Plate, leaving a 1/8" gap between both panels.

- 4.2 Slide two 52" Splines (#77002) into compression seams to lock both panels together. If inserting the Splines is difficult, apply cooking oil to ease installation.

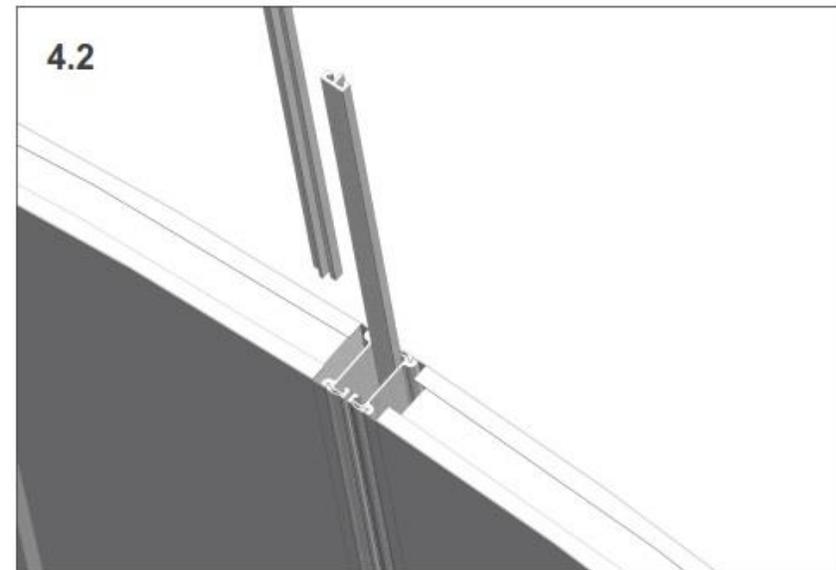
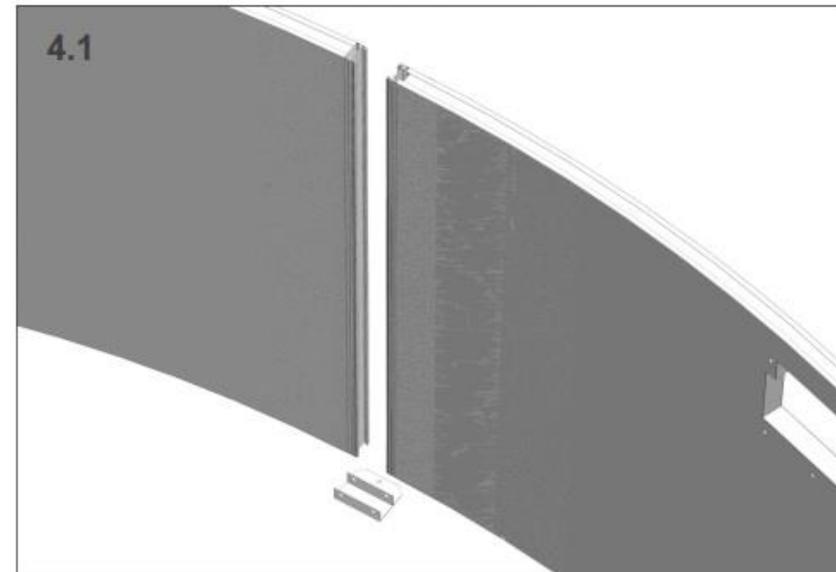
**Do not use petroleum lubricants like WD-40.**

Also ensure:

- 1/8" gap between both panels is uniform top to bottom.
- Splines and seams are free of any sand or contaminants.

Repeat this step with all remaining panels.

**Note – Before final panel is attached, bring sand for floor base and cove into the interior of the site. See page 7 for proper quantity.**



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 4 – Wall Installation (Continued)

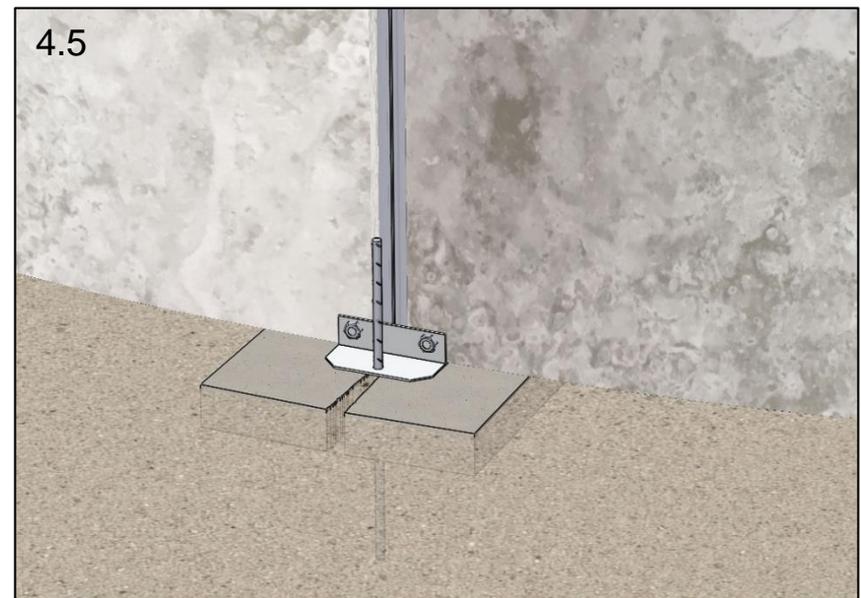
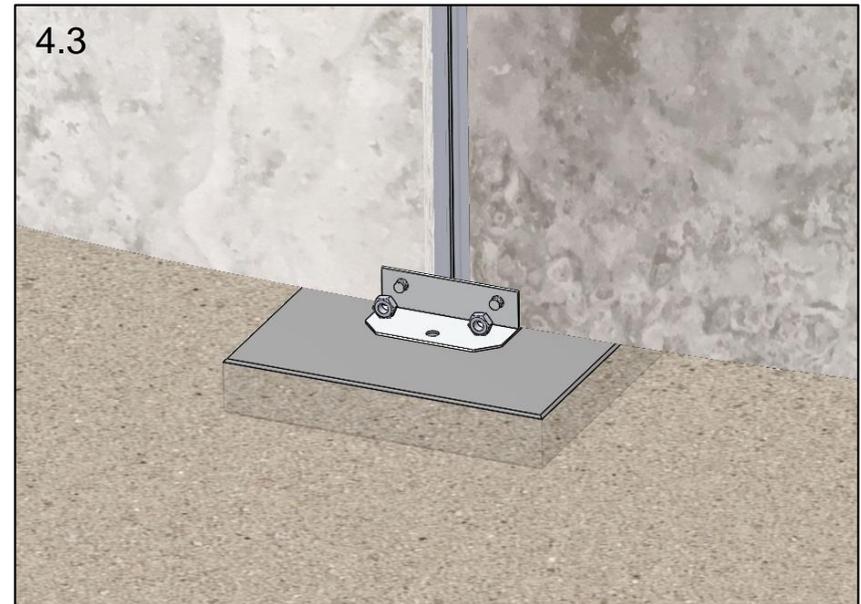
- 4.3 Ensure panels are centered and fully inserted into the Anchor Plates.

Drill 7/16" holes through pool panels at Anchor Plate hole locations using the anchor plate holes as a drill guide. Secure panels with 2-1/2" bolts (#99-0137) and nuts (#99-0134).

- 4.4 **IMPORTANT!**  
Confirm roundness of the pool by measuring the diameter across the pool at each panel joint. All diameters should be identical. Adjust as necessary. If this step is not completed, your pool may not be perfectly round, which could cause problems later, and may void your warranty.

- 4.5 **IN-GROUND ONLY:** If the pool installation is greater than 24" below grade, you must use the included rebar with a concrete collar around the perimeter of the pool. Insert the rebar halfway into the ground through the Anchor Plate holes before pouring the concrete collar.

If the pool is less than 24" below grade, you may skip this step.



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 5 – Create Pool Cove and Base

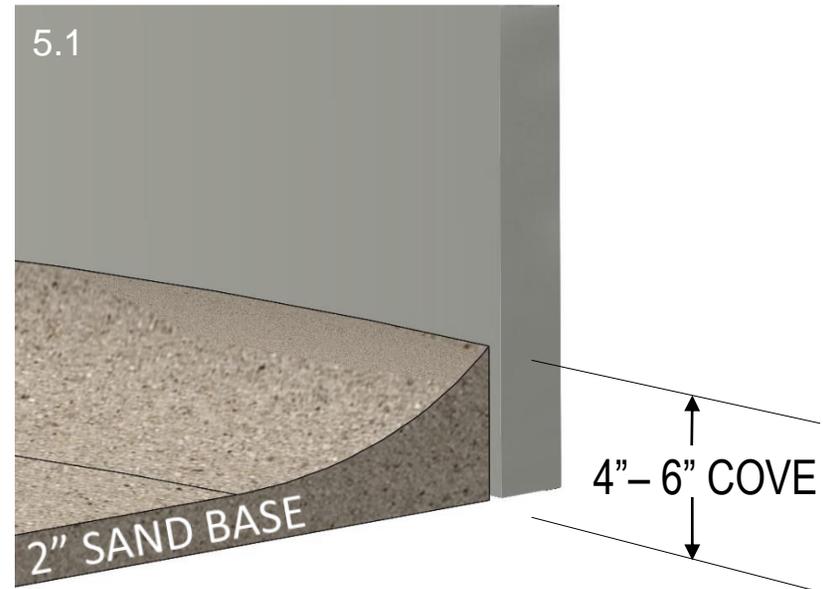
5.1 Using neutral alkalinity sifted earth, or fine sand without pebbles, create pool cove 4"-6" high along entire inside circumference of pool – **NOT OPTIONAL!** The cove will prevent the liner from sliding beneath the pool wall under the weight of the water. See Figure 5.1.

Since chemicals that may be in the ground can cause discoloration or corrosion, we suggest laying polyethylene plastic sheeting under the cove around the perimeter of the wall, ensuring that no earth comes in contact with the metal. Since the presence of such chemicals is beyond the control of the manufacturer, this damage is not covered by the warranty.

**DO NOT USE ANY SUBSTANCE WITH HIGH ALKALINE OR ACID CONTENT, ESPECIALLY PEAT MOSS, AS IT WILL CORRODE METAL PARTS.**

Use remaining sand to create 2" deep sand base over the entire pool area to protect the liner.

Rake and tamp whole area until it is level and smooth. Any bumps or ridges will be perceptible under the liner.



## Section 1

### OPTIMUM FREEFORM ABOVE / IN-GROUND POOL

#### Step 9 – Skimmer Installation

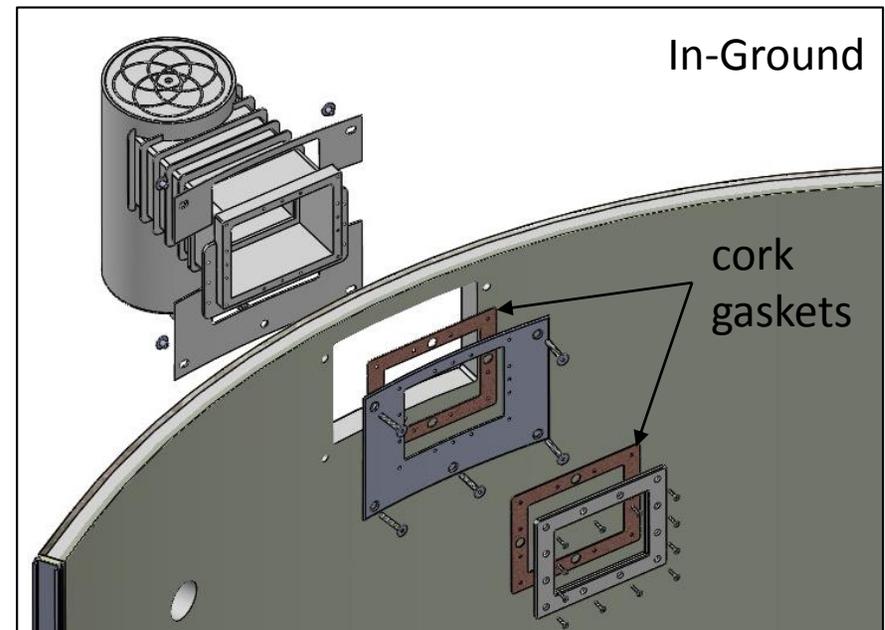
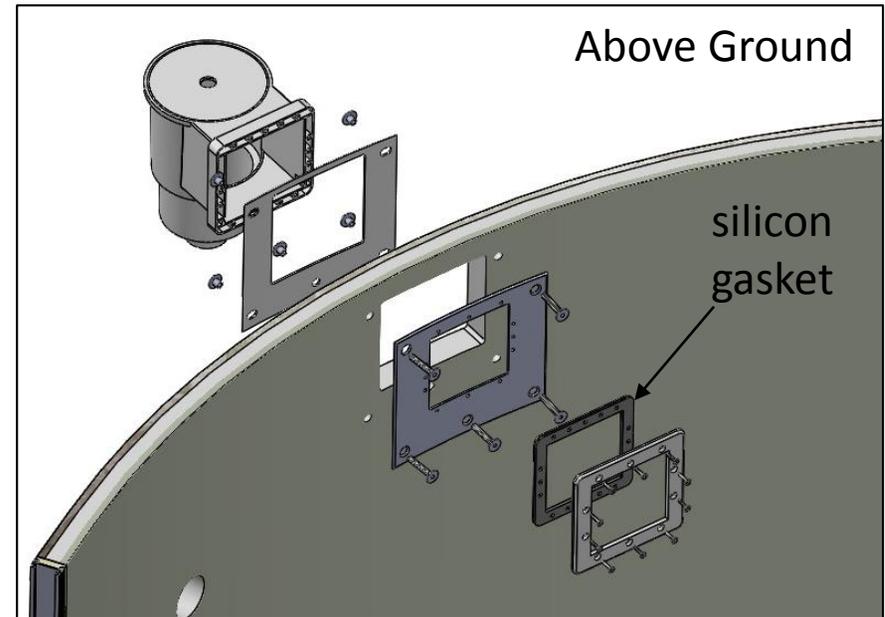
- 9.1 Use the specific gray and white skimmer mounting plates for for the above ground skimmer or in-ground skimmer.
- 9.2 Place gray skimmer mounting plate assembly on the inside of the pool, and white skimmer mounting plate on the outside of the panel, sandwiching the skimmer inside the wall panel cutout. Ensure gaskets are located as illustrated.

Loosely secure assembly with five 2- $\frac{1}{4}$ " countersunk bolts (#99-0131) and flat-head rivet nuts (#99-0132).

Ensure plates are centered and level, then tighten hardware, taking care not to overtighten.

- 9.3 With hardware provided in the skimmer kit, secure skimmer to the gray skimmer plate with 4 screws. Do not fully tighten as these screws will be removed later.

**NOTE:** Skimmer face plate (in skimmer assembly) and remaining screws will be attached after pool liner is installed, locking the skimmer firmly in place. Refer to skimmer kit installation instructions for more information.



## Section 1

### OPTIMUM FREEFORM ABOVE / IN-GROUND POOL

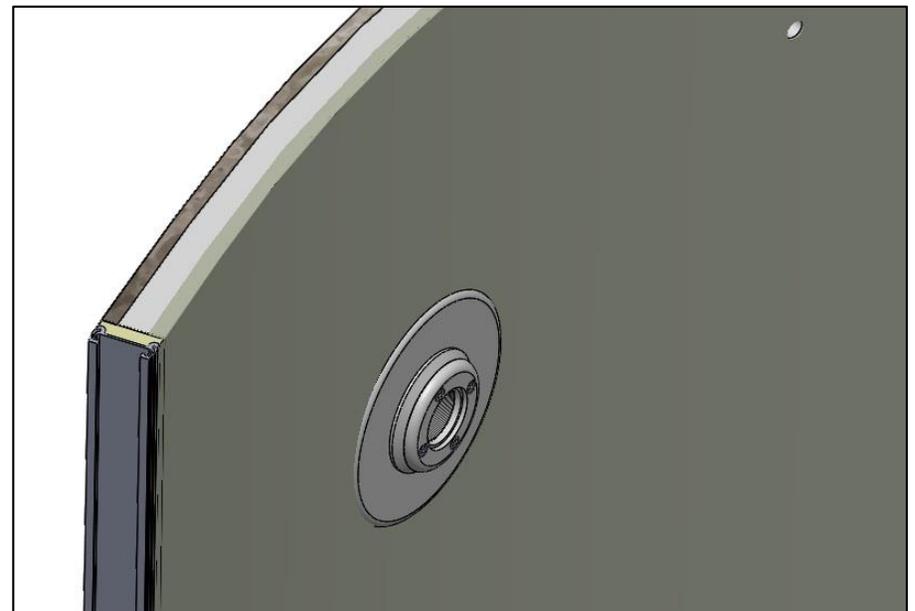
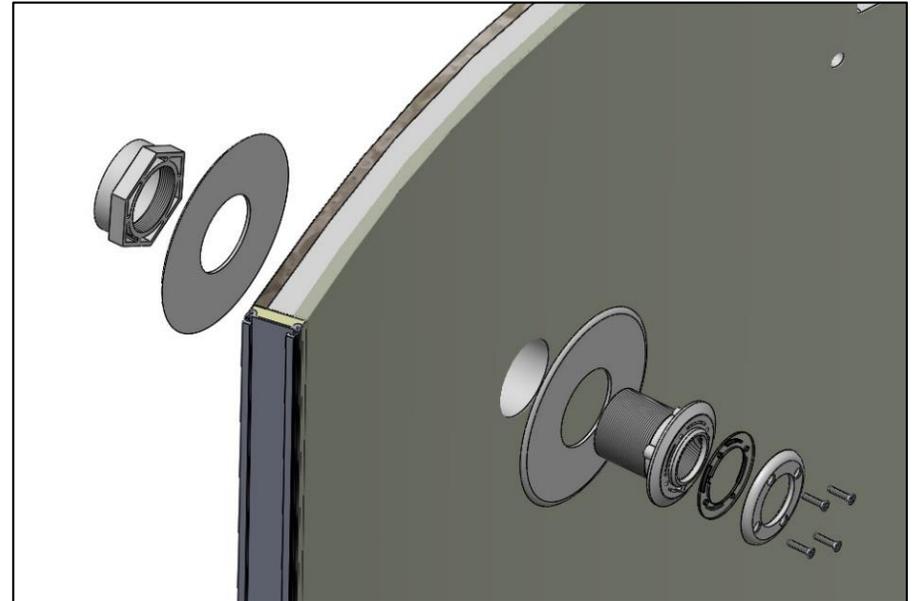
#### Step 10 – Return Fitting Installation

- 10.1 Place white return plate (#77064) over round opening on skimmer panel and insert extended return fitting (#77092) through assembly from interior of the pool.

Place second white return plate (#77064) over extended return fitting on the outside of the pool.

Install extended return fitting nut to secure to panel. Do not overtighten.

**NOTE:** Return fitting face plate and four screws will be removed once pool liner is ready to be installed.



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 8 - Installing Top Coping

##### Above Ground Coping

8.1 Place 2" PVC Top Coping onto each pool panel leaving a 1/2" gap between each length. Coping should be offset from wall panel joints by 2" as shown in Figure 8.2.

8.2 Each length of Top Coping will be attached to the pool with 5 screws from the exterior side of the pool only. Drill evenly spaced 1/8" pilot holes through the Top Coping and exterior pool wall ensuring the top coping is fully seated.

Attach the Top Coping to the pool panels with colored Head Cap Screws #8 x 1/2" (#99-0138). DO NOT OVERTIGHTEN.

**NOTE:** Screws should be placed **at least 4"** from each end of the Top Coping lengths to ensure easy installation of Coping Clips.



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 8 - Installing Top Coping (Continued)

##### In-Ground Coping

8.3 **PAVER COPING:** Place Coping Adaptor Clips (#77176) around the perimeter of the pool with raised edge facing outward. Space clips 12" on center. **Attach to the exterior pool wall only** with one #10 x 3/4" Tek Screw (#99-0090).

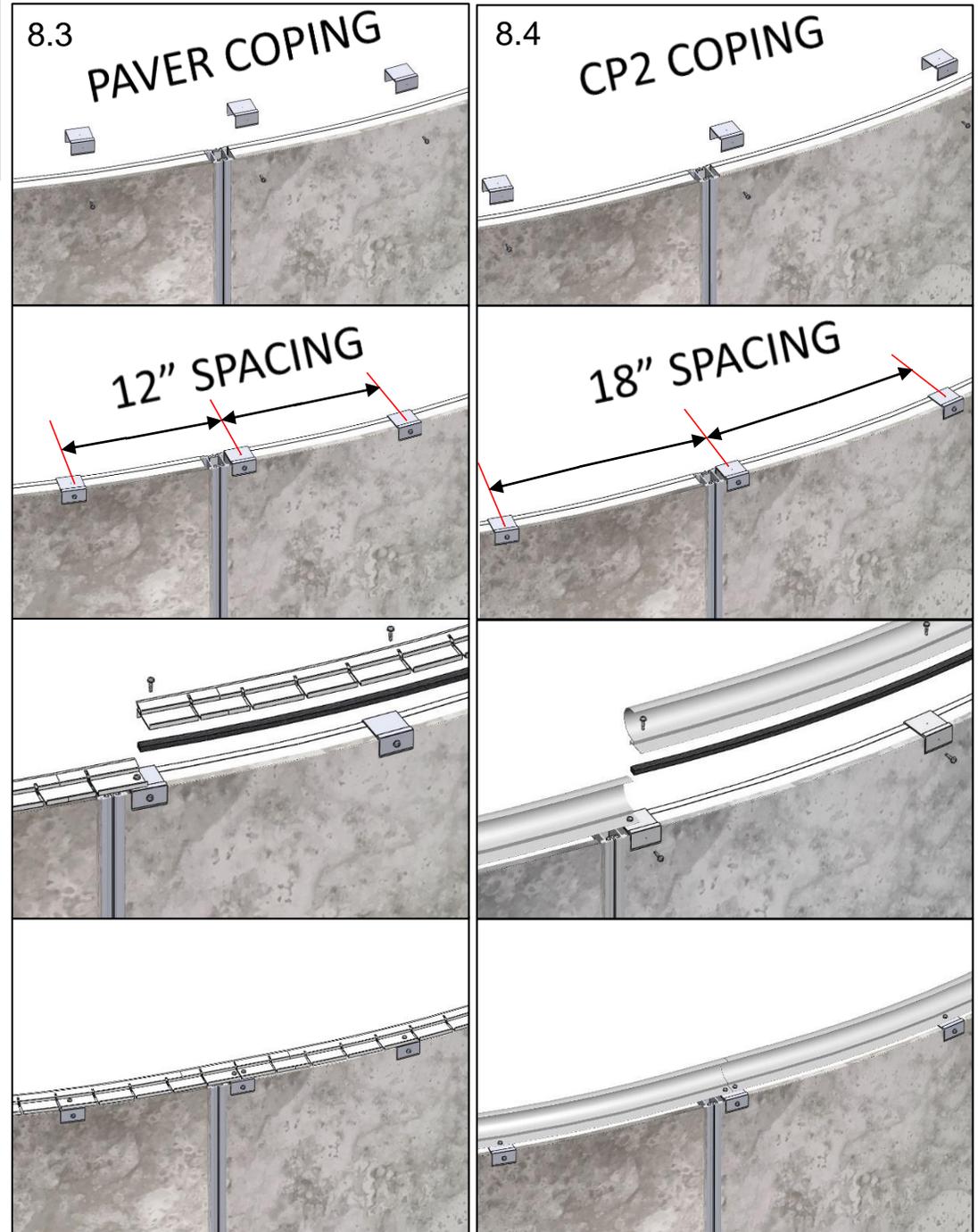
Under each length of paver coping (NOT INCLUDED), place the included Foam Sealer Strip (#77177) under the inside edge as illustrated. This will prevent backfill or debris from falling behind the pool liner.

Use one #10 x 3/4" Tek Screw (#99-0090) to attach the paver coping to each Coping Adaptor Clip.

8.4 **CP2 COPING OR DECK COPING:** Place Coping Adaptor Clips (#77176) around the perimeter of the pool with raised edge facing outward. Space clips 18" on center. Attach to the exterior pool wall only with one #10 x 3/4" Tek Screw (#99-0090).

Under each length of coping (NOT INCLUDED), place the included Foam Sealer Strip (#77177) under the inside edge as illustrated. This will prevent backfill or debris from falling behind the pool liner.

Use one #10 x 3/4" Tek Screw (#99-0090) to attach the paver coping to each Coping Adaptor Clip.



## Section 1

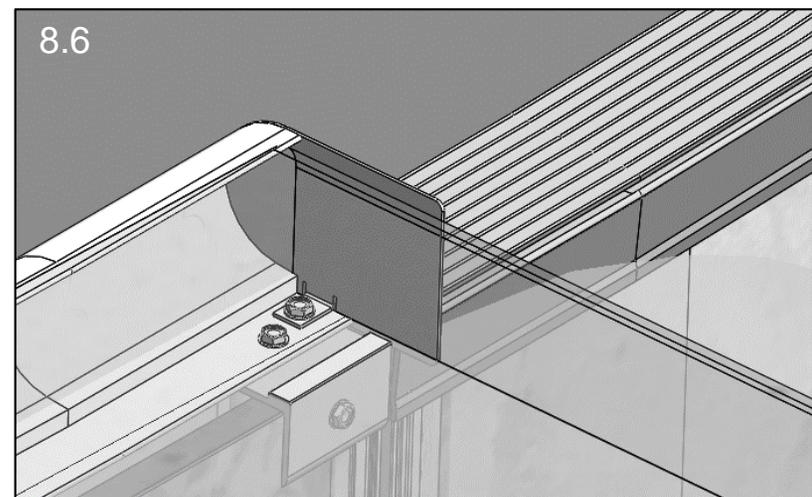
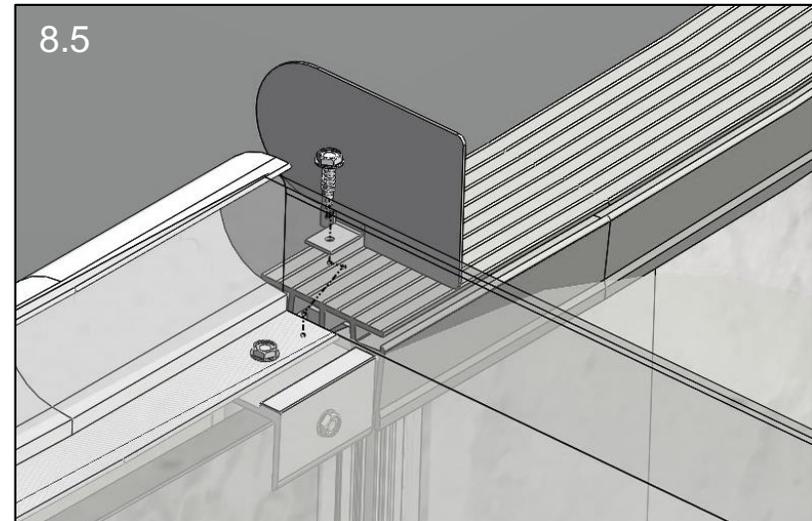
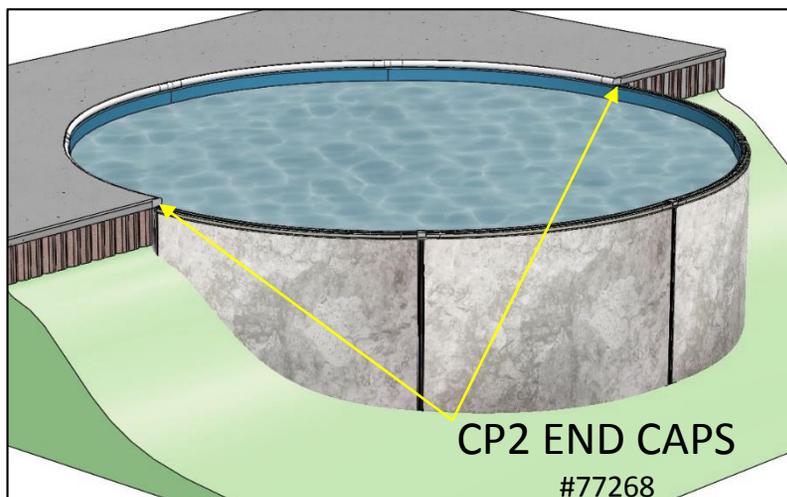
### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 8 - Installing Top Coping (continued)

8.5 For pools that are installed into a hill and will utilize both 2" PVC Top Coping and CP2 coping as illustrated below, there is a transition kit available (#77268). This kit includes two stainless steel plates to cap off the ends of the CP2 coping and give a finished edge.

Bend the lower tab on the end plate as seen in Figure 8.5.

Attach the End Plate with #10 x 3/4" Tek Screw (#99-0090) through the CP2 coping and into the Coping Adaptor Clip (#77176). Repeat on the opposite end.



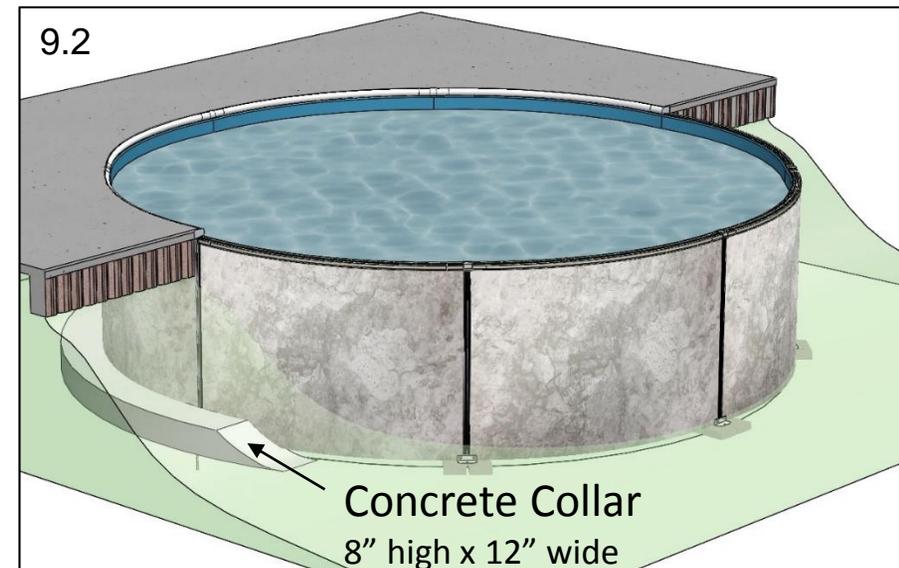
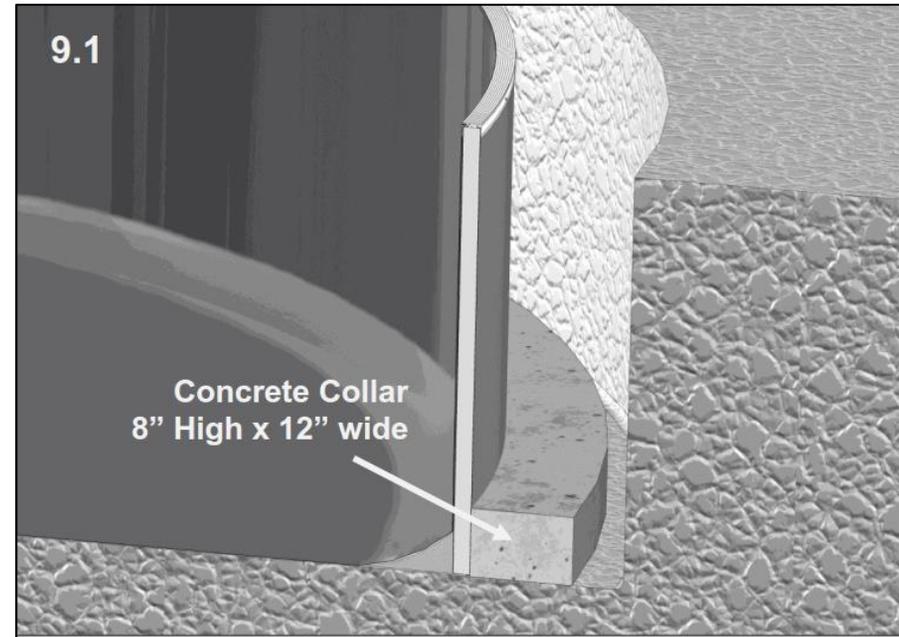
## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 9 - Install Concrete Collar

9.1 **IN-GROUND ONLY:** All pools that are buried more than 24" below grade require a concrete collar, 12" wide by 8" high, around the entire perimeter of the pool. If extra supports are required for patio or other pool features, consider installing them before pouring the concrete.

If the pool is installed into a hill, as illustrated in image 9.2, the pool still requires a concrete collar 12" wide by 8" high at any location where the pool is buried more than 24" below grade. Taper the ends of the concrete collar once the depth below grade becomes less than 24".



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 10 – Install liner

10.1 Check sand in pool is level with no impressions.

Remove liner (NOT INCLUDED) from carton then unfold liner outside of the pool.

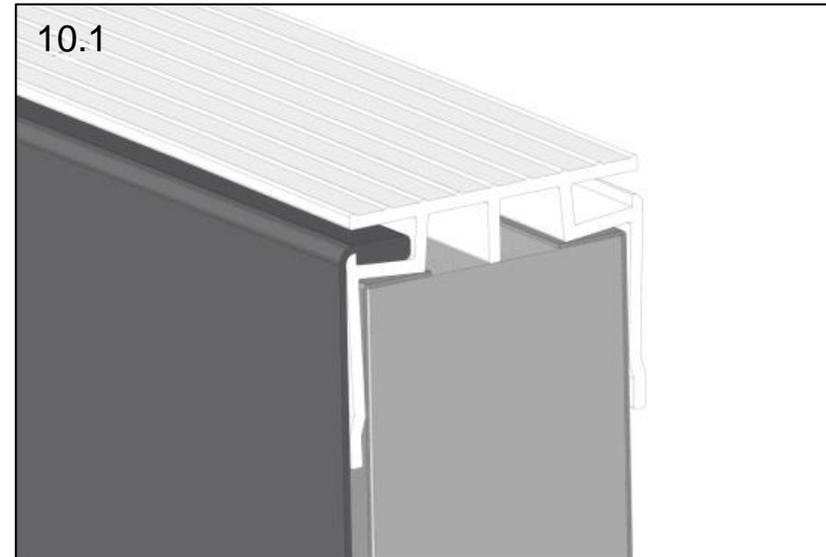
Loosely fold liner and gently place it in the pool, taking care to not disturb the smoothed sand base of the pool.

While standing outside of the pool, snap liner bead into coping receiver track around entire pool. Remove as many wrinkles from the liner as possible as you go by gently tugging on the liner or using a soft broom. A shop vacuum can be used to remove wrinkles by attaching the vacuum hose to the skimmer outlet and sealing with duct tape. Remove vacuum after pool has 6" of water.

#### Step 11 – Install Coping Clips

11.1 Install Coping Clips (#77005) onto top coping by inserting bottom lip first, then snapping into place. **Do not screw coping clips into place.**

CP2 coping (NOT INCLUDED) – install Coping Clips by first catching top edge then pressing down firmly to lock in place.



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

#### Step 11 – Add Water

- 11.1 Start filling the pool with water once the concrete has cured, if applicable.

Once the water level reaches 2-3" from the Return Fitting, install the Faceplates on the Return Fitting and Skimmer as shown in Figures 12.1 and 12.2.

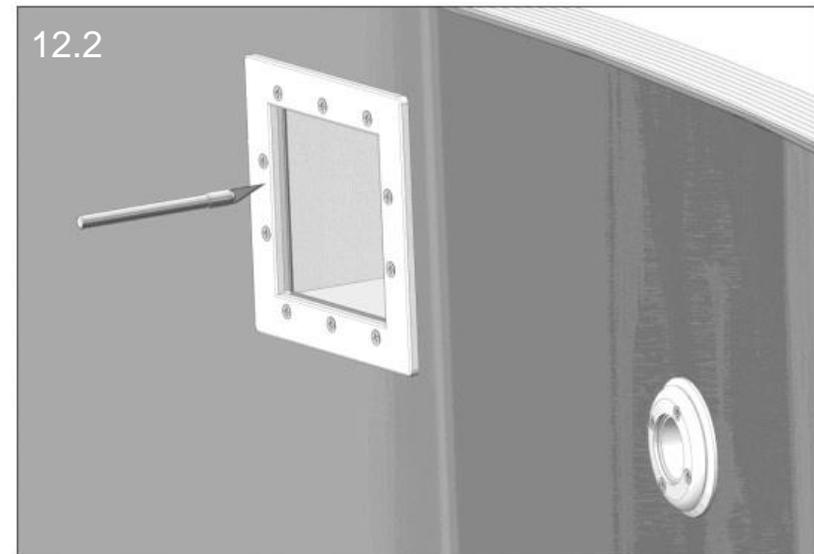
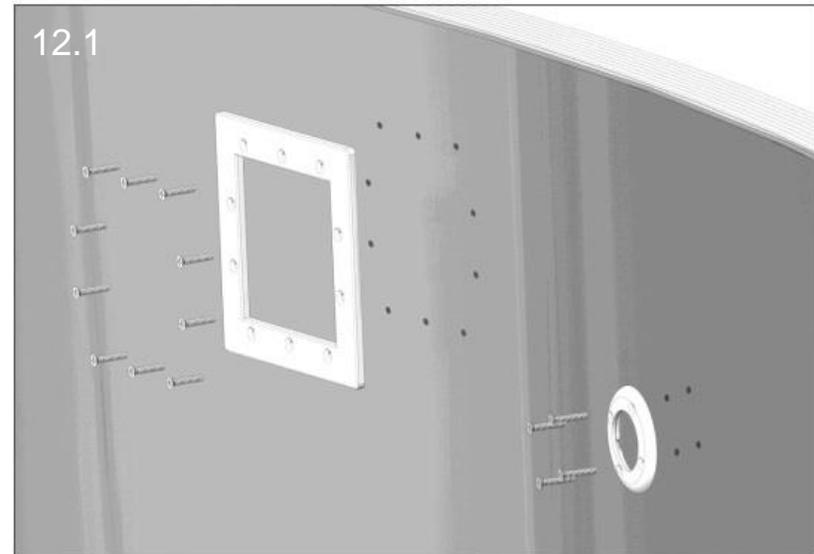
When Faceplates are installed, complete filling the pool until water level is at the middle of the Skimmer opening.

#### Step 12 – Install Face Plates

- 12.1 Locate screw holes for each opening in pool wall.

Carefully pierce liner within the frame of the Skimmer and Return Faceplates with a nail or awl. Attach Skimmer and Return Faceplates using screws provided in the Skimmer Kit and tighten.

- 12.2 Using a sharp blade, carefully trim liner inside the openings for Skimmer and Return openings. Install eyeball (not included) into Return Fitting.



## Section 1

### OPTIMUM ROUND ABOVE / IN-GROUND POOL

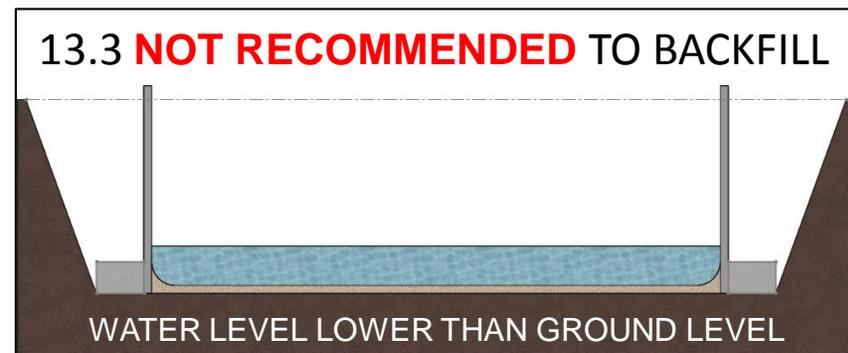
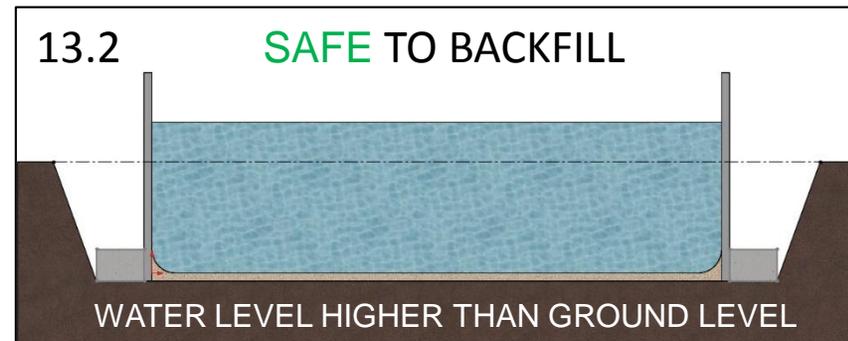
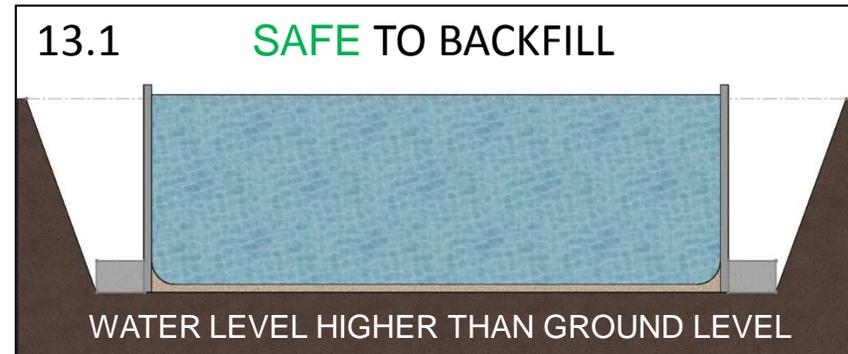
#### Step 13 - Backfill

- 13.1 Ensure all electrical bonding required in your area is completed before backfilling the pool. This is a good time to add any concrete foundation forms or perforated drain pipes, if they will be used.

**IMPORTANT:** Before any backfilling is started, the pool water level must exceed the height of the surrounding backfill required, as in examples 13.1 and 13.2. Failure to do so will put excessive inward pressure on the pool panels which may cause irreversible damage, and may void your warranty.

Crushed stone or gravel aggregate, 3/8" to 3/4" in diameter is the recommended backfill material. Backfill may be placed directly against the pool wall. Do not use expansive soils such as clay since this type of soil will place additional stress on the pool and not allow for proper drainage away from the surrounding area.

Only compact the backfill material manually by hand. Do not use heavy machinery, especially around the skimmer and plumbing fittings.



# IN-GROUND WITH STEP

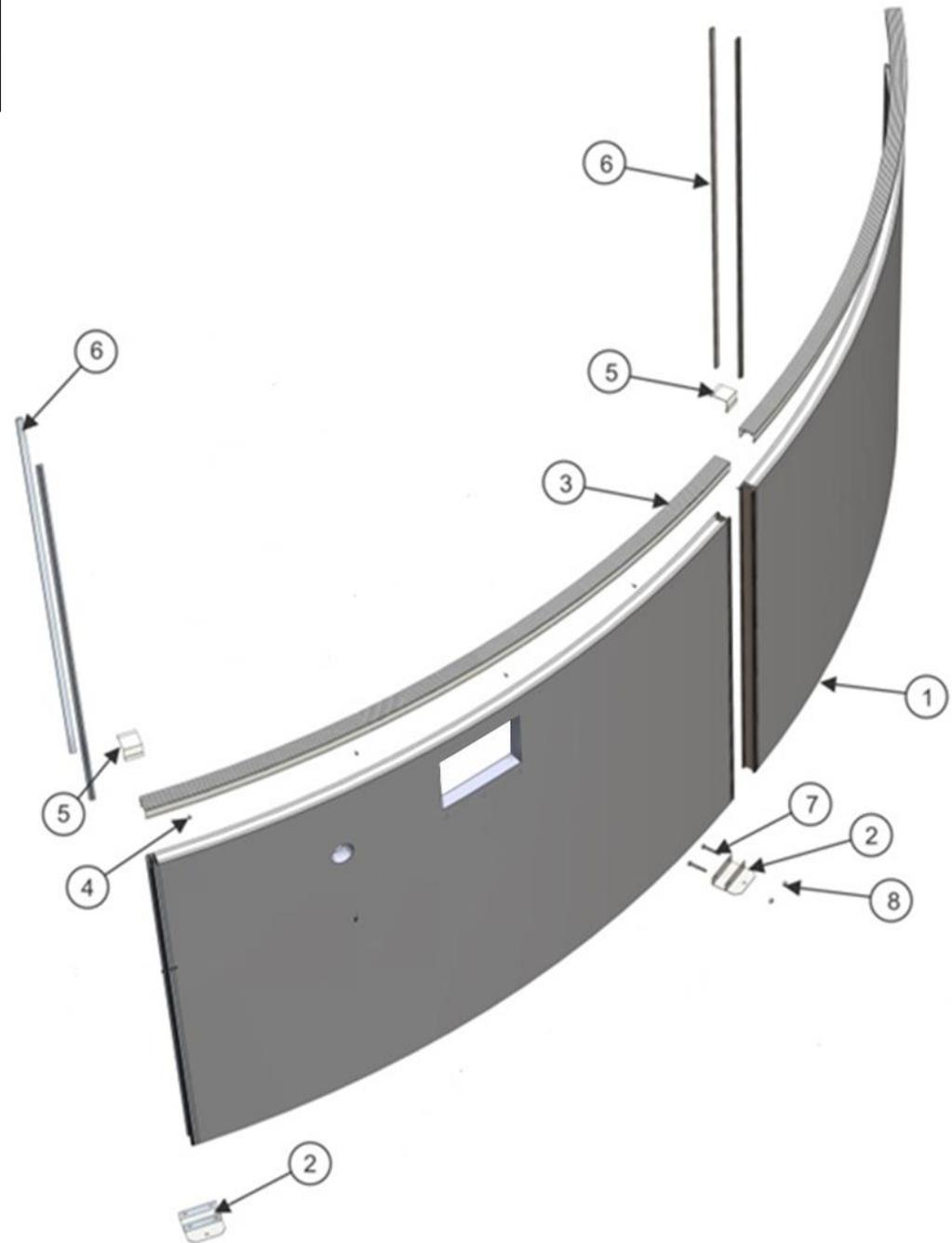
## Section 2

### TABLE OF CONTENTS – Pool Construction

#### Pool Components Check List

##### Pool

1	Panels	See page 39
2	Bottom plates	#77004
3	PVC coping 2" clay	See page 39
4	Cap screws - #8 x 1/2"	#99-0138
5	Coping clip standard clay	#77310
6	Splines - 52"	#77002
7	Bolts, hex head alum. - 2 1/2"	#99-0137
8	Nuts, alum. - 3/8"	#99-0134



## Section 2

### TABLE OF CONTENTS – Pool Construction

#### Pool Components Check List: In-Ground Skimmer Panel

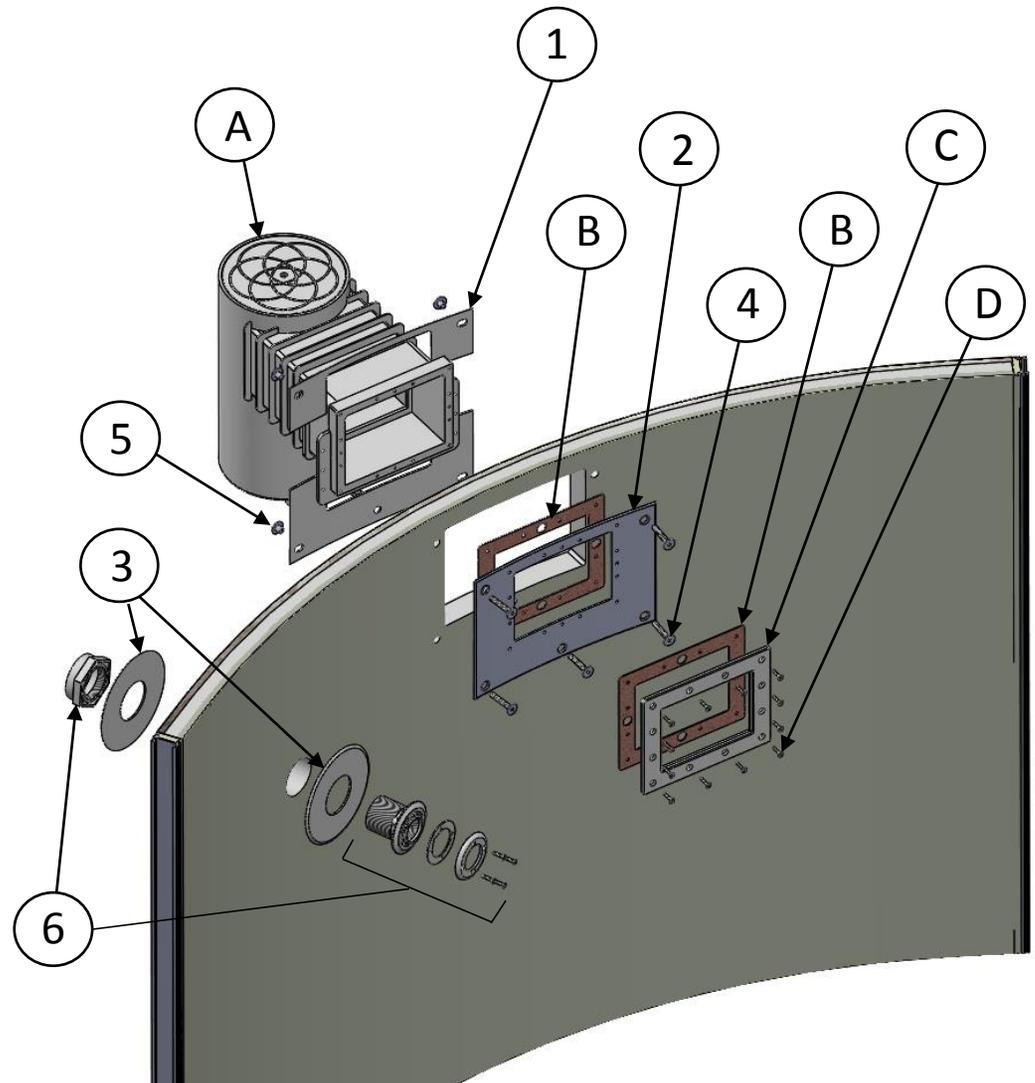
##### Pool

1. Skimmer Plate SP1084, White #77518
2. Skimmer Plate SP1084, Gray #77519
3. White Return Plate #77064
4. Bolts, Countersunk SS- 2 ¼" #99-0131
5. Nuts, Flat Head Rivet SS #99-0132
6. Extended Return Fitting Set #77092

##### Skimmer Kit – (NOT INCLUDED) –

- For Illustration Purposes Only -

- A. Skimmer
- B. Synthetic Gasket
- C. Skimmer Face Plate
- D. Screws, Flat Head



## Section 2

### TABLE OF CONTENTS – Pool Construction

#### Step Components Check List

##### Step Assembly

18. Step Filler Panel

19. Nuts, Hex Flange 3/8" SS #10660

6. Splines, 52" #77002

20. Step Rod Extrusion 52" #77173

21. Bolts, Hex Flange 3/8" x 1" SS #99-0104

22. Step Socket Extrusion 52" #77143

23. Step Fender Washers 3/8" x 1-3/4" #77175

24. Step (NOT INCLUDED) -

25. Step Anchor Plate, Right #77142

26. Step Anchor Plate, Left #77141

15. Rebar 3/8" x 15" #77001

27. Step Diagonal Brace 18" #77146

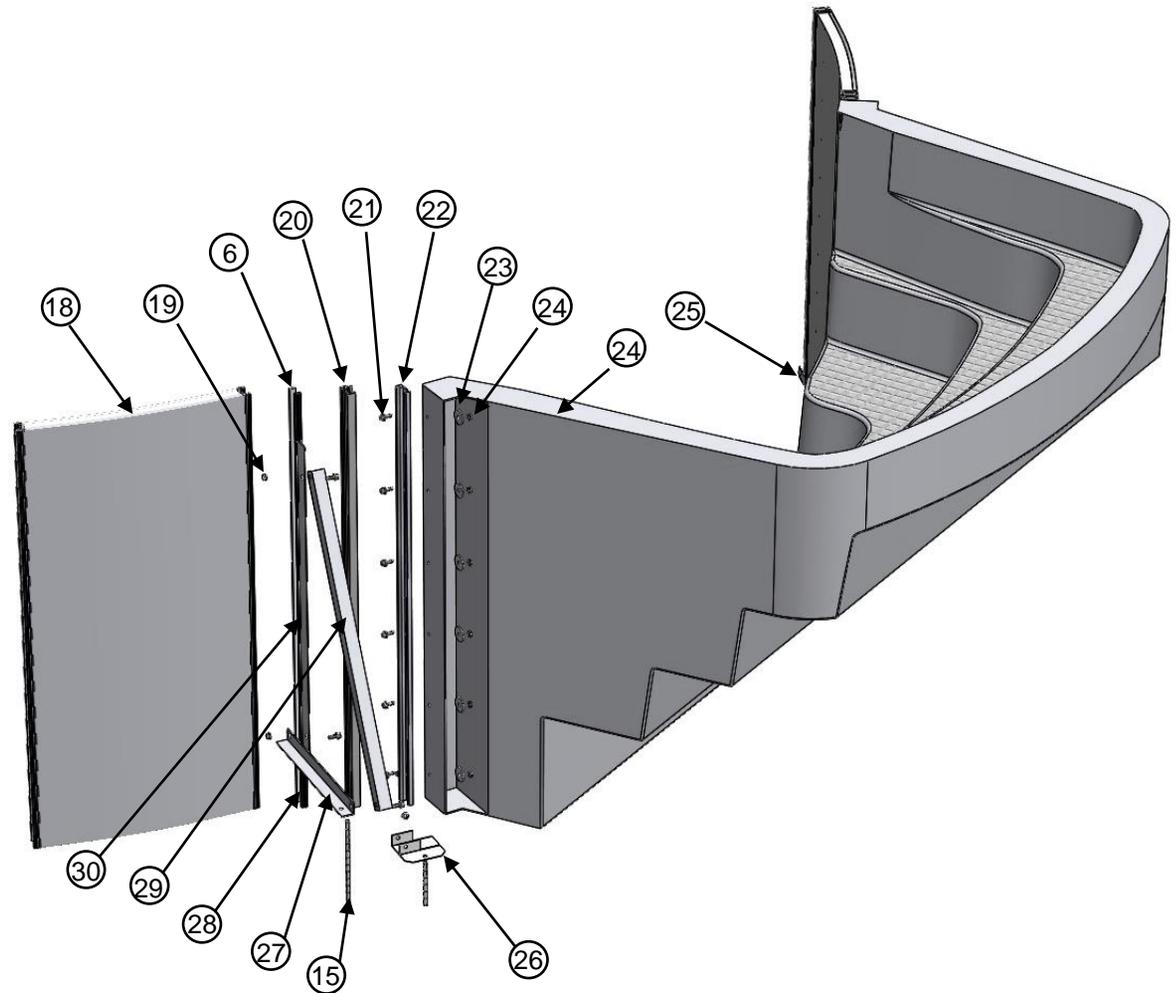
28. Short Splines 5-3/4" #77014

29. Step Horizontal Brace 37-13/16" #77148

30. Extended Spline 40-1/2" #77013

### IMPORTANT:

- 12' THROUGH 18' POOLS MUST USE THE 91-3/4" WIDE RADIUS STEP
- 21' THROUGH 30' POOLS MUST USE THE 96" WIDE STRAIGHT STEP.



# Section 2

## OPTIMUM ROUND IN-GROUND WITH STEP

### Parts Per Pool Size

PANELS	Part No	12'	14'	16'	18'	21'	24'	27'	30'
OPTIMUM 12FT PANEL, STANDARD 72-1/4"	77319	3							
OPTIMUM 12FT PANEL, IG SKIMMER 72-1/4"	77320	1							
OPTIMUM 12FT PANEL, STEP FILLER 24-3/16"	77323	2							
OPTIMUM 14FT PANEL, STANDARD 84-1/4"	77334		3						
OPTIMUM 14FT PANEL, IG SKIMMER 84-1/4"	77335		1						
OPTIMUM 14FT PANEL, STEP FILLER 37-15/16"	77338		2						
OPTIMUM 16FT PANEL, STANDARD 73-7/16"	77055			5					
OPTIMUM 16FT PANEL, IG SKIMMER 73-7/16"	77071			1					
OPTIMUM 16FT PANEL, STEP FILLER 26-1/4"	77133			2					
OPTIMUM 18FT PANEL, STANDARD 82-3/4"	77056				5				
OPTIMUM 18FT PANEL, IG SKIMMER 82-3/4"	77072				1				
OPTIMUM 18FT PANEL, STEP FILLER 36"	77134				2				
OPTIMUM 21FT PANEL, STANDARD 78"	77129					7			
OPTIMUM 21FT PANEL, IG SKIMMER 78"	77130					1			
OPTIMUM 21FT PANEL, STEP FILLER 29-3/8"	77135					2			
OPTIMUM 24FT PANEL, STANDARD 89-1/16"	77057						7		
OPTIMUM 24FT PANEL, IG SKIMMER 89-1/16"	77073						1		
OPTIMUM 24FT PANEL, STEP FILLER 40-1/8"	77136						2		
OPTIMUM 27FT PANEL, STANDARD 100-1/4"	77058							7	
OPTIMUM 27FT PANEL, IG SKIMMER 100-1/4"	77074							1	
OPTIMUM 27FT PANEL, STEP FILLER 51-1/4"	77137							2	
OPTIMUM 30FT PANEL, STANDARD 93-1/16"	77131								9
OPTIMUM 30FT PANEL, IG SKIMMER 93-1/16"	77132								1
OPTIMUM 30FT PANEL, STEP FILLER 44-1/4"	77138								2
TOTAL PANEL COUNT	-	6	6	8	8	10	10	10	12

	PART	Part No	12'	14'	16'	18'	21'	24'	27'	30'
2	ANCHOR PLATE	77004	5	5	7	7	9	9	9	11
3	IN-GROUND COPING ADAPTER CLIP	77176	51	51	68	68	68	85	102	102
4	SCREW, TEK SS - #10 X 3/4	99-0090	102	102	136	136	136	170	204	204
5	FWP IN GROUND COPING FOAM STRIP 10'	77177	5	5	7	7	7	9	10	10
6	SPLINE - 52"	77002	12	12	16	16	20	20	20	24
7	BOLT, HEX HEAD ALUM. - 2-1/2"	99-0137	12	12	16	16	20	20	20	24
8	NUT, ALUM. - 3/8"	99-0134	12	12	16	16	20	20	20	24
9	SKIMMER REDUCTION INSERT	77070	1	1	1	1	1	1	1	1
10	SKIMMER PLATE SP1084 WHITE (EXTERIOR)	77140	1	1	1	1	1	1	1	1
11	SKIMMER PLATE SP1084 GRAY (INTERIOR)	77139	1	1	1	1	1	1	1	1
12	RETURN PLATE WHITE (EXTERIOR/INTERIOR)	77064	2	2	2	2	2	2	2	2
13	BOLT, COUNTERSUNK SS - 2-1/4"	99-0131	5	5	5	5	5	5	5	5
14	NUT, FLAT HEAD RIVET SS- 3/8"	99-0132	5	5	5	5	5	5	5	5
15	REBAR - 3/8 X 15"	77001	6	6	8	8	10	10	10	12
16	EXTENDED RETURN FITTING	77092	1	1	1	1	1	1	1	1
17	HEX ALLEN KEY 7/32" (TOOL)	99-0140	1	1	1	1	1	1	1	1
	PART (Step Adaptor Kit)	Part No	16'	16'	16'	18'	21'	24'	27'	30'
18	STEP FILLER PANEL	-	2	2	2	2	2	2	2	2
19	NUT, HEX FLANGE 3/8" SS	10660	18	18	18	18	18	18	18	18
20	STEP ROD EXTRUSION 52"	77173	2	2	2	2	2	2	2	2
21	BOLT, HEX FLANGE 3/8" X 1" SS	99-0104	18	18	18	18	18	18	18	18
22	STEP SOCKET EXTRUSION 52"	77143	2	2	2	2	2	2	2	2
23	STEP ATTACHMENT WASHER 3/8" X 1-3/4"	77175	12	12	12	12	12	12	12	12
25	STEP ANCHOR PLATE MODIFIED RIGHT	77142	1	1	1	1	1	1	1	1
26	STEP ANCHOR PLATE MODIFIED LEFT	77141	1	1	1	1	1	1	1	1
27	STEP DIAGONAL BRACE ANGLE 18" PIECE	77146	2	2	2	2	2	2	2	2
28	FWP SHORT SPLINES 5-3/4"	77014	4	4	4	4	4	4	4	4
29	STEP HORIZONTAL BRACE ANGLE 37-13/16"	77148	2	2	2	2	2	2	2	2
30	FWP EXTENDED SPLINE 40-1/2"	77013	2	2	2	2	2	2	2	2

## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Tools You Will Need:

Tape measure - 100'	Pliers - channel lock
Marking spray paint or powder	9/16" open end wrench
String - 25' length	Screwdrivers, flat & Phillips
Stake or peg – 12"	Metal file
Transit, laser level or 3' level	Utility knife
Rubber mallet	PVC pipe cutter
Hacksaw	Pool trowel
Spade	Cloth rag
Square shovel	Cooking spray
Pick	Shop vacuum
Rake	Soft bristle broom
Tamper square 10" or 12"	Extension cord
2x4, straight - 12'	Hose with spray nozzle
Square	Wheelbarrow
Power drill	
7/16" and 1/8" drill bits	
1/4" hex nut driver bit	
Socket set	
Duct tape	

#### Also Needed But Not Included:

**Patio blocks** (2" x 12" x 12")

**Concrete** (when installed more than 24" below grade)

**Backfill** (crushed stone or gravel 3/8" – 3/4" diameter)

**Perforated drain pipe** (for drainage if the site floods easily)

Pool Size	Masonry Sand Cubic Yards	Patio Blocks	Concrete Cubic Yards (If Installing +24" Below Grade)
12'	0.8	6	1
14'	1.1	6	1-1/4
16'	1.5	8	1-1/2
18'	1.9	8	1-3/4
21'	2.5	10	2
24'	3.2	10	2-1/4
27'	4.1	10	2-1/2
30'	5.0	12	2-3/4

## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 1 – Select a Pool Location

##### DO NOT locate the pool:

- over underground lines (electrical, sewage, plumbing, gas).
- over septic tanks.
- under overhead electrical lines.
- near hazardous structures.
- out of compliance with local code restrictions.

##### DO NOT locate the pool on a site:

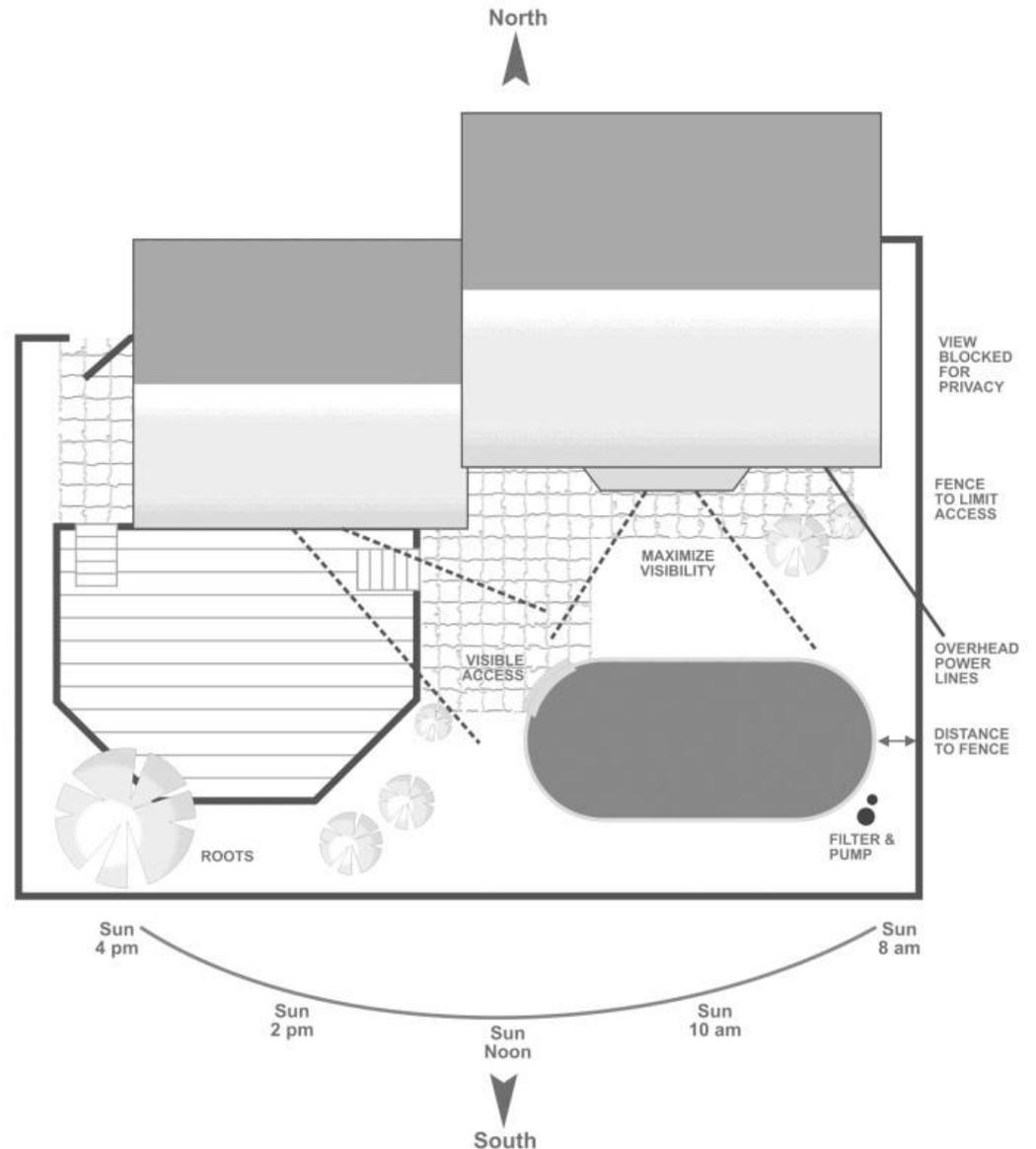
- that is hilly - avoid areas with sudden slopes within 6' of pool
- that has poor drainage or tends to flood.
- in areas with sharp objects.
- on ground that has been treated with weed killer, pesticides or other chemicals.
- that has nut grass, Bermuda grass or bamboo grass growing nearby, as they can grow through your liner and puncture it.

##### DO NOT assemble you pool:

- on asphalt, tar or oil-based surfaces.
- with components such as filters, pumps, and heaters placed where they can be used to access the pool by young children.

##### DO ensure:

- the area selected has a level and firm base.
- surface is flat 2' beyond pool diameter.
- access is available to electrical and water supplies.
- the pool is installed far from structures which could encourage dangerous activities, like jumping from a roof or playset.
- you are aware of your local codes and restrictions.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 2 – Create a Foundation

- 2.1 Establish the pool circumference by driving a stake into the ground at the center of the site.

Attach one side of a string to the center stake, measure the string out to equal the pool radius, plus 12 inches for clearance. Holding the string, walk to the planned outer perimeter of your pool. Holding the string taut, walk in a circle, marking the circle with spray paint, a lawn edger or white powder.

Remove all sod, weeds and other growth from within the circle and where the step will be positioned. Dig to the depth the pool will be installed below grade. **It is recommended that the top of the pool be 2”- 6” above the surrounding area.**

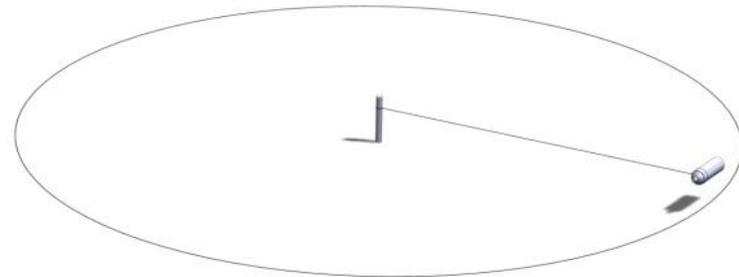
**NOTE:** The pool floor may be dug deeper, sloping toward the center of the pool, for use with an expandable liner.

Find the lowest spot within the pool area and level the ground to that lowest spot with shovel, rake or pick. Dig high areas down to this level. Do not add dirt to the low areas as that will cause settling after the pool is filled with water.

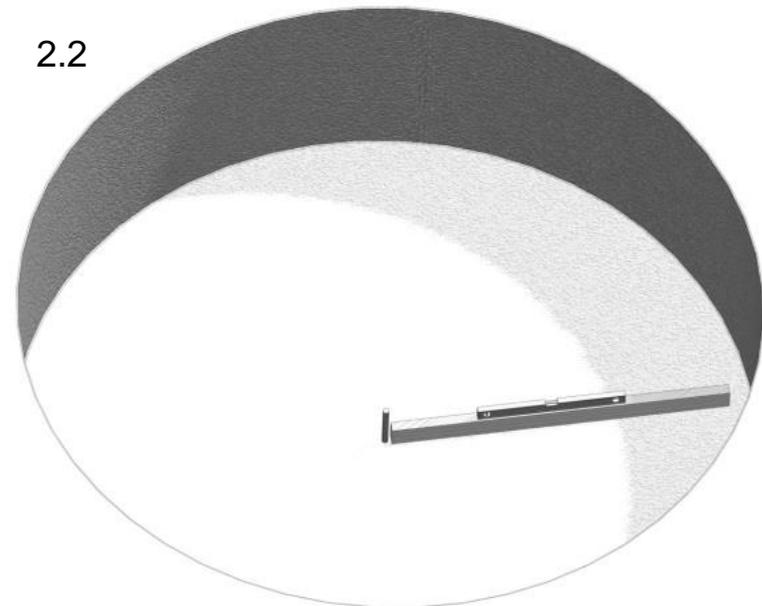
Remove protruding roots, stones and other sharp objects that could damage the pool. Tamp down ground with square tamper.

- 2.2 Ensure the site is level and flat using a long, straight board or a carpenter’s level or transit. Continue to remove high areas of ground if needed.

2.1



2.2



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

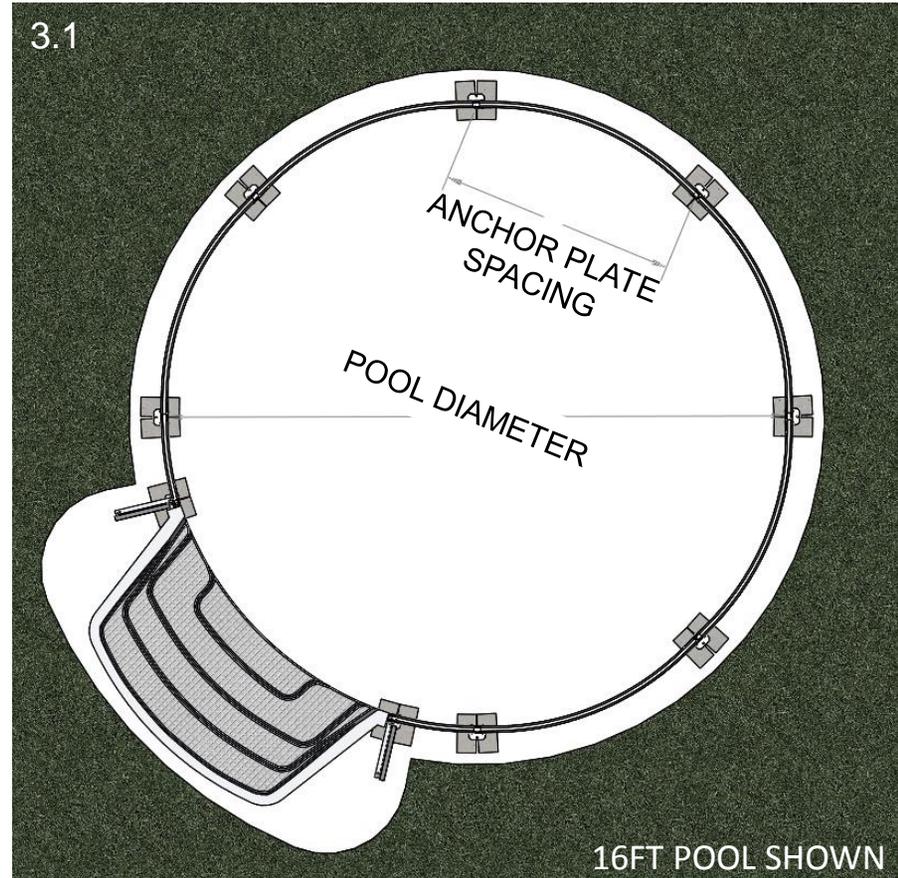
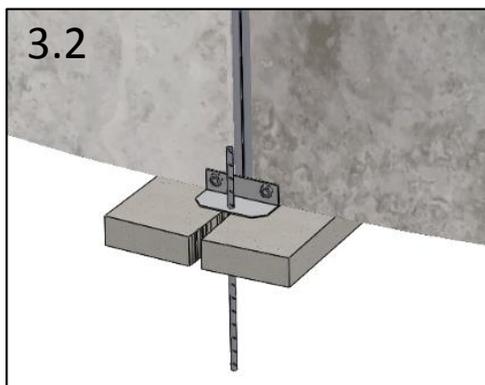
#### Step 3 – Install Patio Blocks

3.1 Mark exact pool radius using the center stake.

Using the chart on this page, in accordance with the pool footprint, mark the locations of the patio blocks. **Note: installations with the polymer step, substitute two full sized panels for two smaller filler panels along with the step.** Adjust patio block position accordingly.

Break patio block into two halves to allow rebar to later be installed through the anchor plate (Figure 3.2). Sink a patio block flush into the ground at each mark. All patio blocks must be flush with the ground, solid and level with the ground and each other in all directions.

Panel joints will be located over each patio block. Place an anchor plate (#77004) on top of each patio block.



Pool Size	16'	18'	21'	24'	27'	30'
Patio Block Spacing	73-1/2"	82-5/8"	77-7/8"	89"	100-1/8"	93-3/16"
Reference Angle Between Markings	45 Deg	45 Deg	36 Deg	36 Deg	36 Deg	30 Deg

## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 4 – Wall Installation

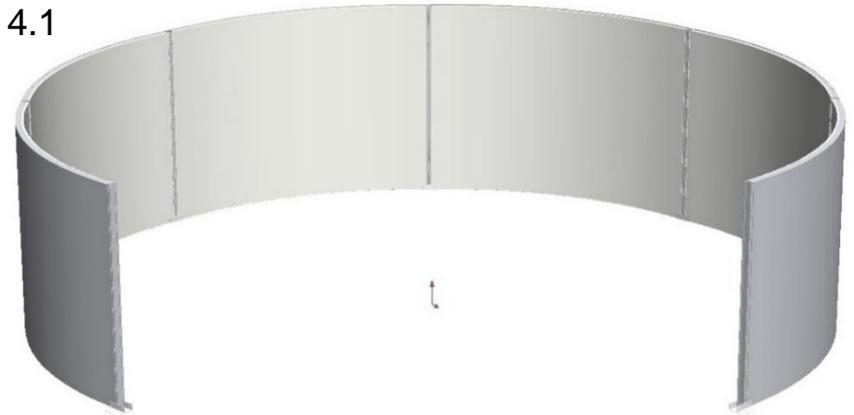
- 4.1 The Optimum Pool with Step excludes two standard sized panels. This void in the pool is where the step and two shorter Filler Panels will be located. Assemble the pool as instructed below while keeping this void at the specific desired location of the step.

**Note- The Skimmer Panel should also be located at the desired location during installation.**

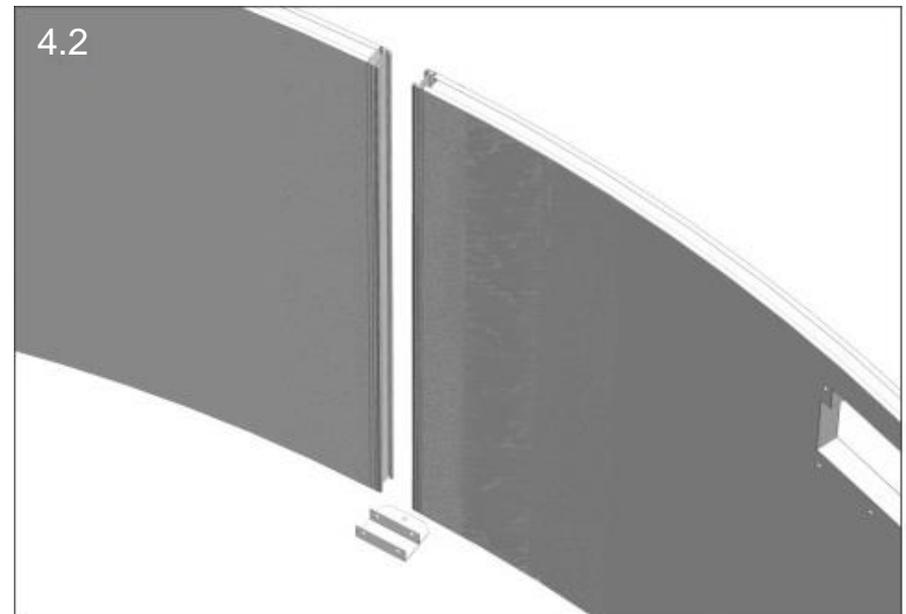
- 4.2 The Anchor Plates located on top of each patio block must be centered between every panel joint.

Place two standard length panels over the Anchor Plate and insert leaving a 1/8" gap between both pool panels.

4.1



4.2



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 4 – Wall Installation (Continued)

- 4.3 Slide two 52" Splines (#77002) into compression seams to lock both panels together. If inserting the Splines is difficult, apply cooking oil to ease installation.

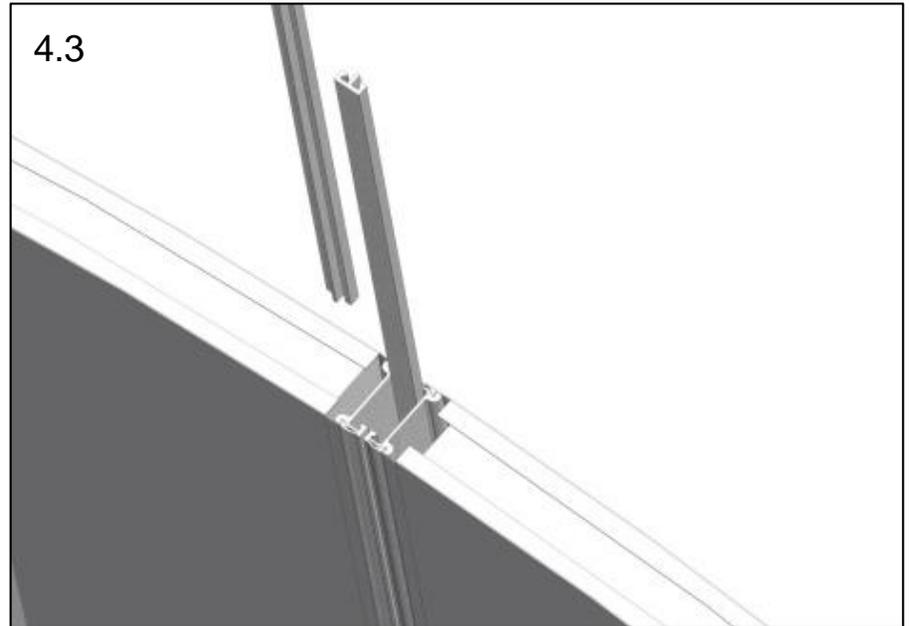
**Do not use petroleum lubricants like WD-40.**

If you still have difficulty, make sure the 1/8" gap between both panels is uniform top to bottom and all Splines and seams are free of any sand or contaminants.

Repeat this step with all remaining standard panels.

- 4.4 Assemble shorter Filler Panels on each side of the void where the step will be placed using two 52" Splines and an Anchor Plate (#77004).

Note: shorter Filler Panels must be located on each side of the step.



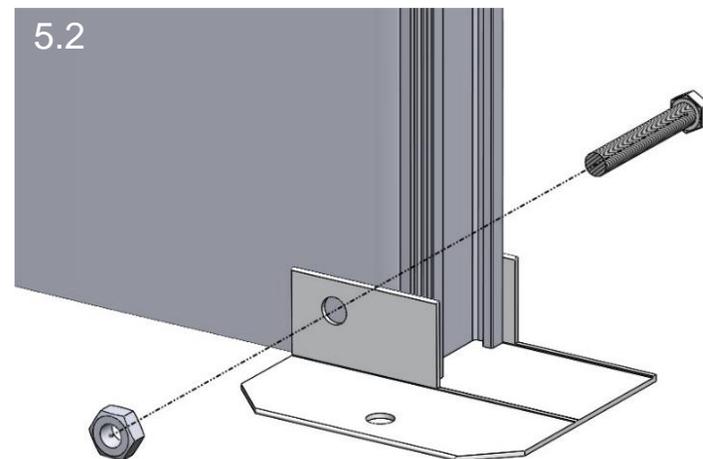
## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 5 – Anchor Plate Installation

- 5.1 Two Anchor Plates included with the pool have only one mounting hole as pictured in figure 5.2. These are to be used on the filler panels at the step void. There is a specific left and right Anchor Plate for these two locations (Figure 5.1).
- 5.2 Drill one 7/16" hole through each filler panel at the Bottom Plate hole location and secure with one 2-1/2" bolt (#99-0137) and nut (#99-0134).

**Note – Before step is attached, bring in sand for the floor and cove of the pool.  
(See page 28 for quantity)**



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

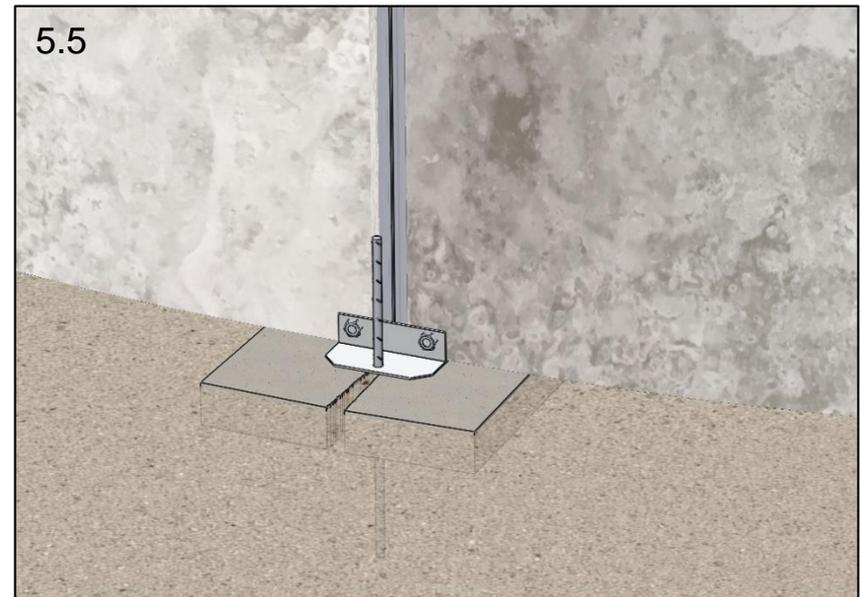
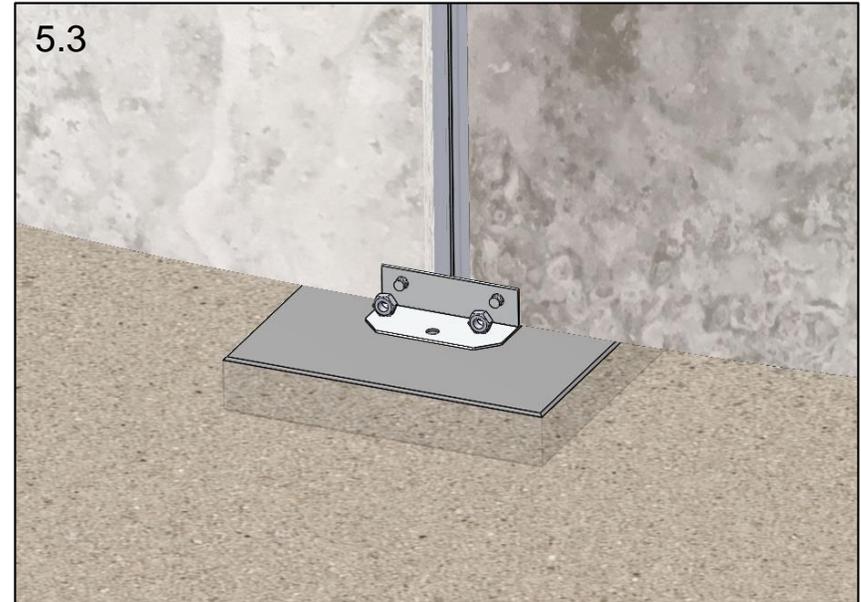
#### Step 5 – Anchor Plate Installation (Continued)

5.3 Make sure panels are centered and fully inserted into the Bottom Plate.

Drill 7/16" holes through pool panels at anchor plate hole locations using the anchor plate holes as a drill guide. Secure panels with 3/8" x 2-1/2" bolts (#99-0137) and nuts (#99-0134).

5.4 **IMPORTANT!**  
Confirm roundness of the pool by measuring the diameter across the pool at each panel joint. All diameters should be identical. Adjust as necessary. If this step is not completed, your pool may not be perfectly round, which could cause problems later, and may void your warranty.

5.5 Insert included rebar (#77001) halfway into the ground through every Anchor Plate hole before pouring the required concrete collar.



## Section 2

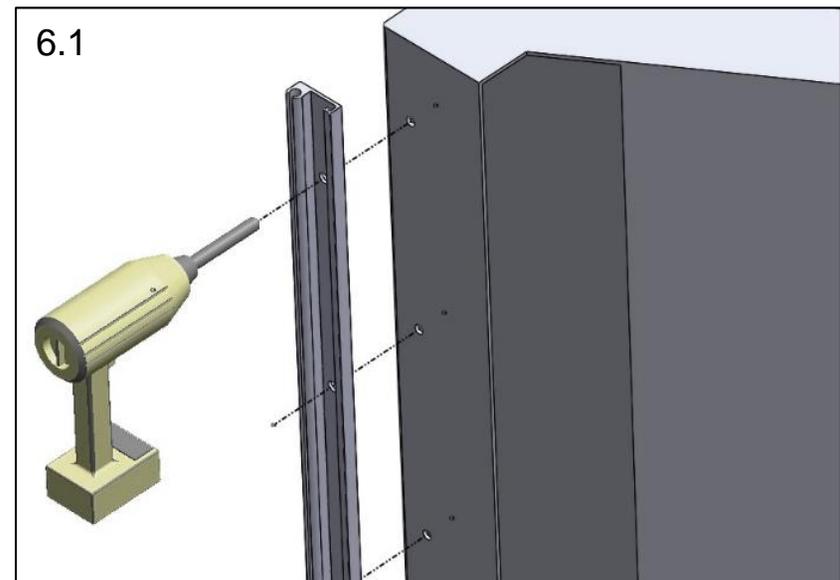
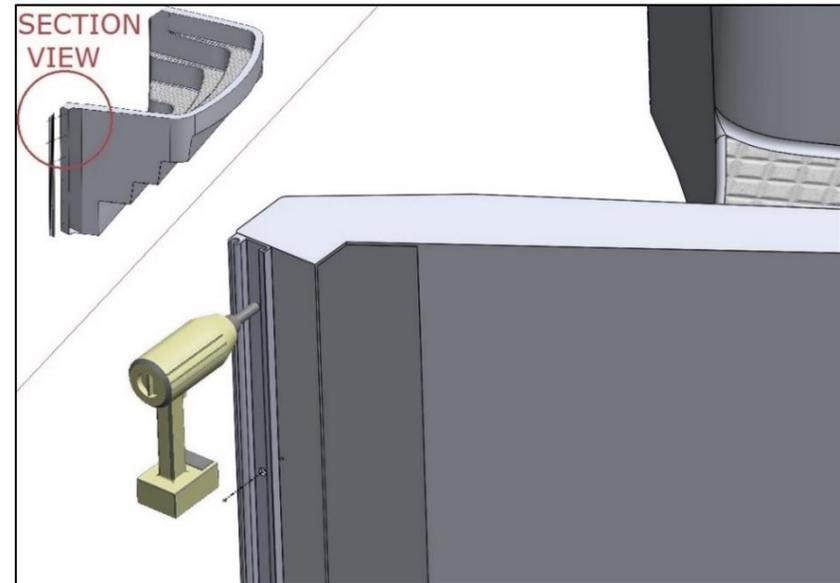
### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 6 – Step Installation

- 6.1 Use the Step Socket Spline (#77143) as a drill template on the side flange of the step. Make sure the socket side of the extrusion is towards the interior of the pool as illustrated and drill six 13/32" holes.

Repeat for opposite side.

**NOTE – The front face of the step and Step Socket Spline must be parallel to each other before drilling. This will ensure the step is correctly positioned once installed into the pool.**

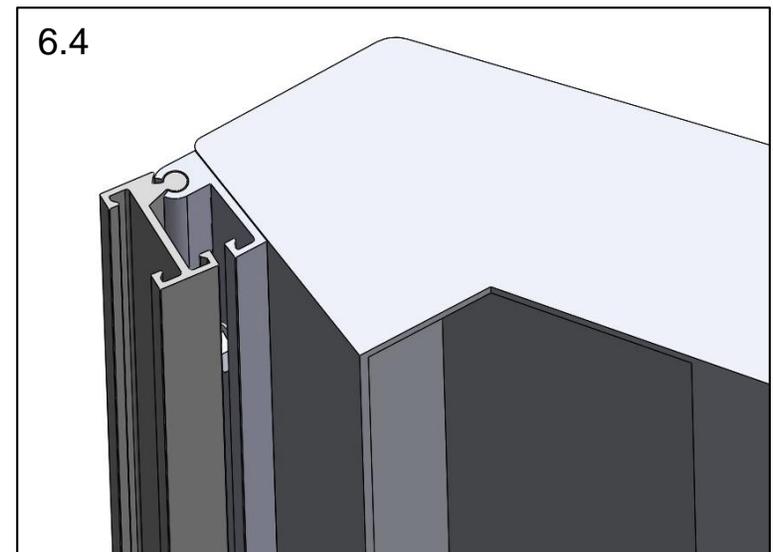
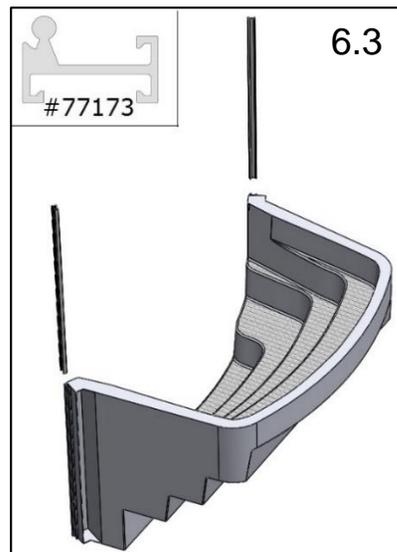
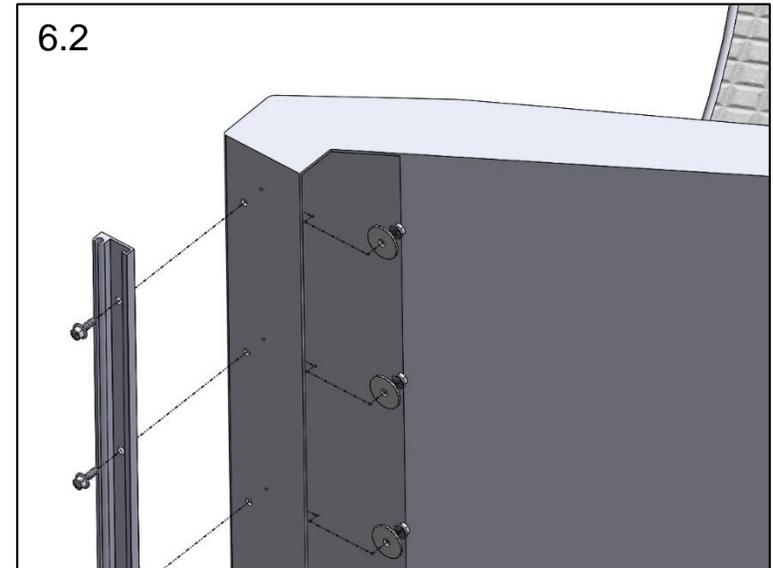


## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 6 – Step Installation (Continued)

- 6.2 Attach STEP SOCKET SPLINE (#77143) to each side of the step with the included 3/8" X 1" bolts, nuts and 1-3/4" fender washers as illustrated. (Hardware bag #77144)
- 6.3 Slide Step Rod Spline (#77173) into the Step Socket Spline on both sides of the step.
- 6.4 **NOTE - This part must articulate freely within the Step Socket Spline. A Spline will not be inserted into this compression joint.**

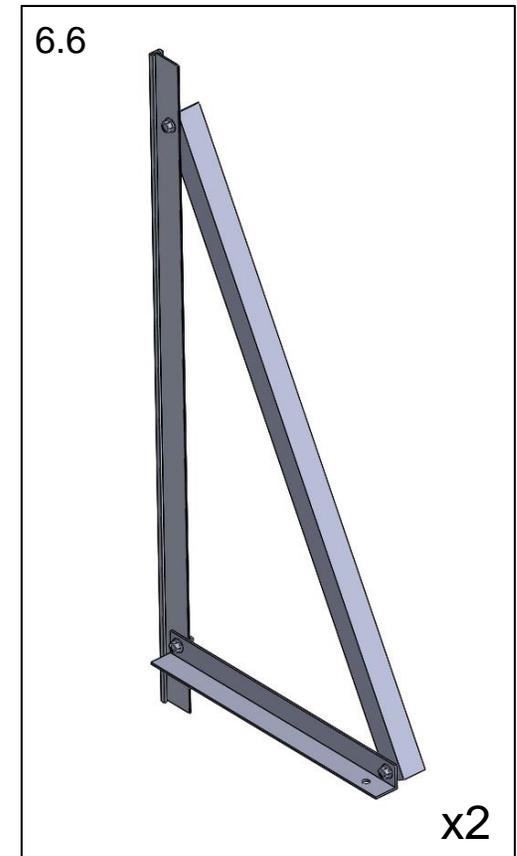
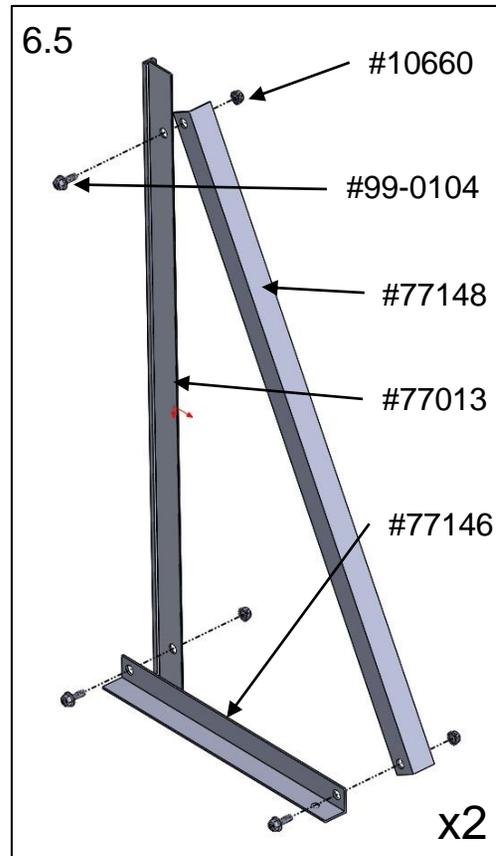


## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 6 – Step Installation (Continued)

- 6.5 Assemble A-frame step (Figure 5.5) with the included 3/8" x 1" bolts (99-0136) and nuts (99-0134). There will be two of these assemblies, one for each side of the step.



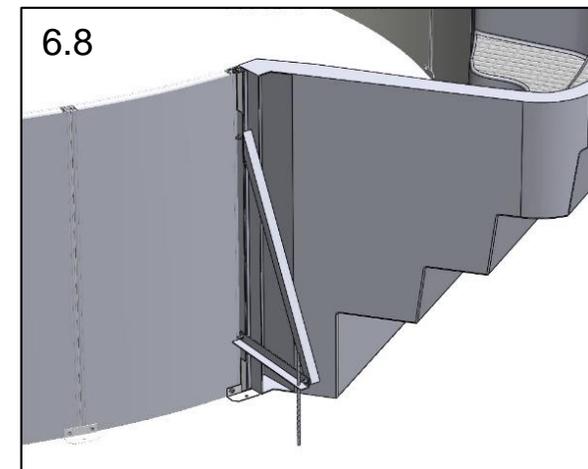
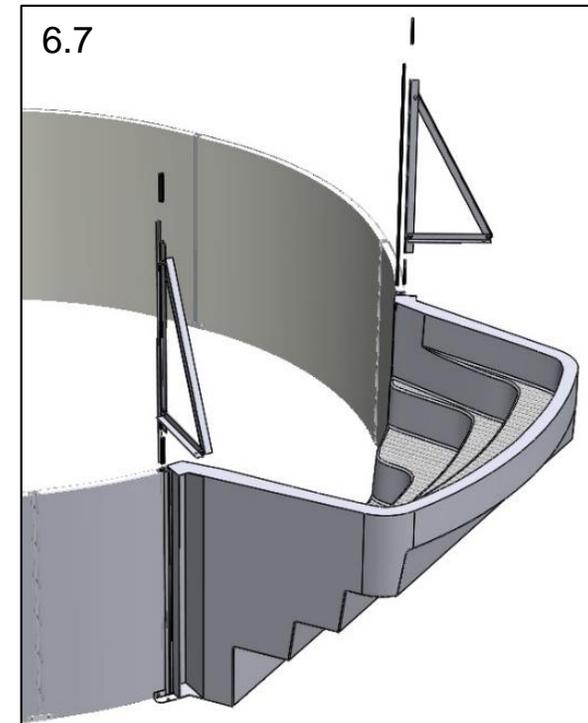
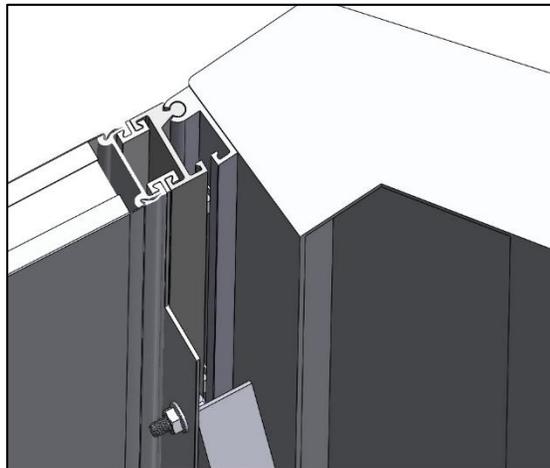
## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 6 – Step Installation

- 6.7 Position step within the void of the pool wall making sure the Step Rod Splines are parallel to the ends of each Filler Panel. Slide a 52" Spline (#77002) into the interior compression seams to lock the step to the Filler Panels.
- 6.8 Slide one 5-3/4" Short Spline (#77014) into the exterior compression seams between the Filler Panel and Step Rod Spline. Follow this part with the A-frame step support previously assembled in Step 6.5 and one additional 5-3/4" Short Spline (#77014). Once complete there should be three components stacked within the same joint.

Repeat for the opposing side.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 7 – Create Pool Cove and Base

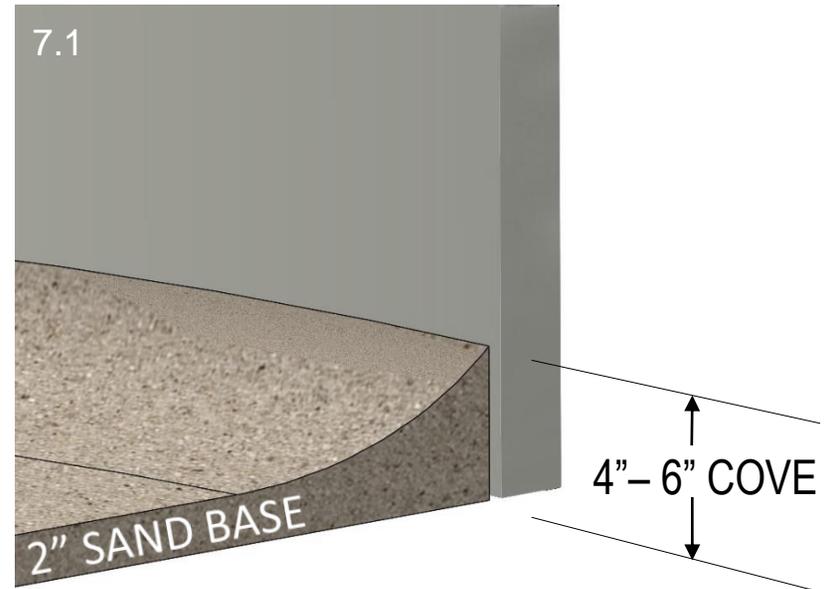
7.1 Using neutral alkalinity sifted earth, or fine sand without pebbles, create pool cove 4"-6" high along entire inside circumference of pool – **NOT OPTIONAL!** The cove will prevent the liner from distending beneath the pool wall under the weight of the water. See Figure 5.1.

Since chemicals that may be in the ground can cause discoloration or corrosion, we suggest laying polyethylene plastic sheeting under the cove around the perimeter of the wall, ensuring that no earth comes in contact with the metal. Since the presence of such chemicals is beyond the control of the manufacturer, this damage is not covered by the warranty.

**DO NOT USE ANY SUBSTANCE WITH HIGH ALKALINE OR ACID CONTENT, ESPECIALLY PEAT MOSS, AS IT WILL CORRODE METAL PARTS.**

Use remaining sand to create 2" deep sand base over the entire pool area to protect the liner.

Rake and tamp down whole area until it is level and smooth. Any bumps or ridges will be perceptible under the liner.



## Section 2

### OPTIMUM FREEFORM IN-GROUND WITH STEP

#### Step 11 – Skimmer Installation

11.1 Use the specific gray and white skimmer mounting plates for for the above ground skimmer or in-ground skimmer.

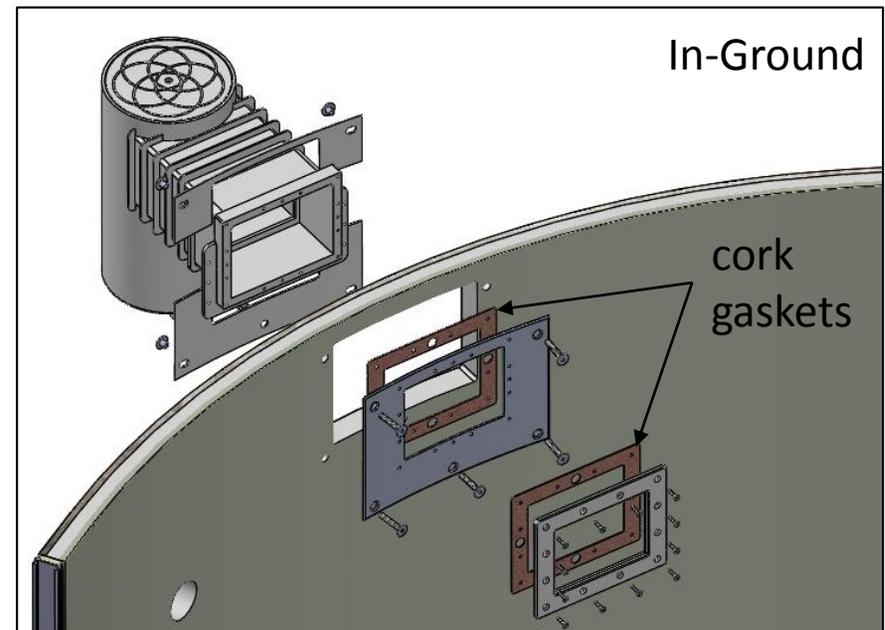
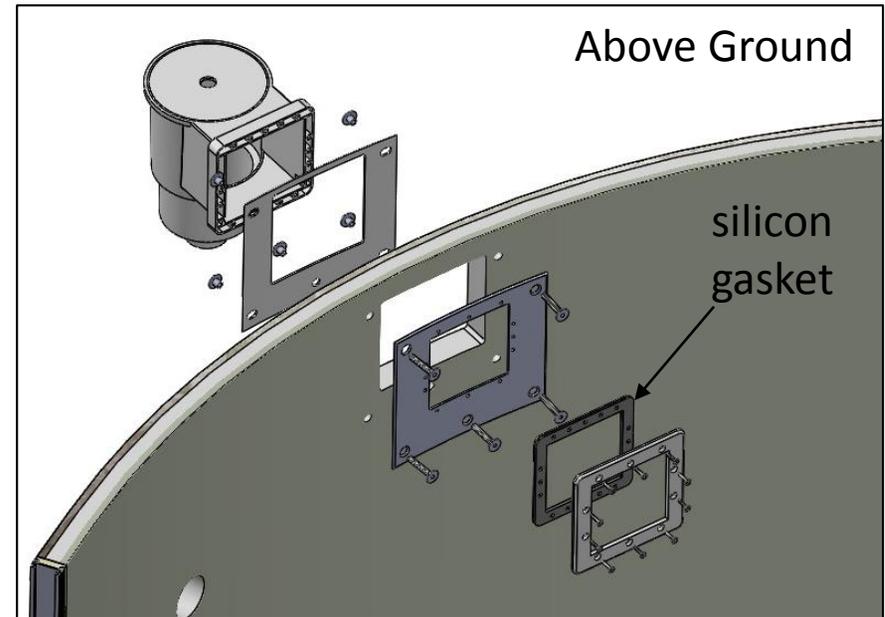
11.2 Place gray skimmer mounting plate assembly on the inside Of the pool, and white skimmer mounting plate on the outside of the panel, sandwiching the skimmer inside the wall panel cutout. Ensure gaskets are located as illustrated.

Loosely secure assembly with five 2- $\frac{1}{4}$ " countersunk bolts (#99-0131) and flat-head rivet nuts (#99-0132).

Ensure plates are centered and level, then tighten hardware, taking care not to overtighten.

11.3 With hardware provided in the skimmer kit, secure skimmer to the gray skimmer plate with 4 screws. Do not fully tighten as these screws will be removed later.

**NOTE:** Skimmer face plate (in skimmer assembly) and remaining screws will be attached after pool liner is installed, locking the skimmer firmly in place. Refer to skimmer kit installation instructions for more information.



## Section 2

### OPTIMUM FREEFORM IN-GROUND WITH STEP

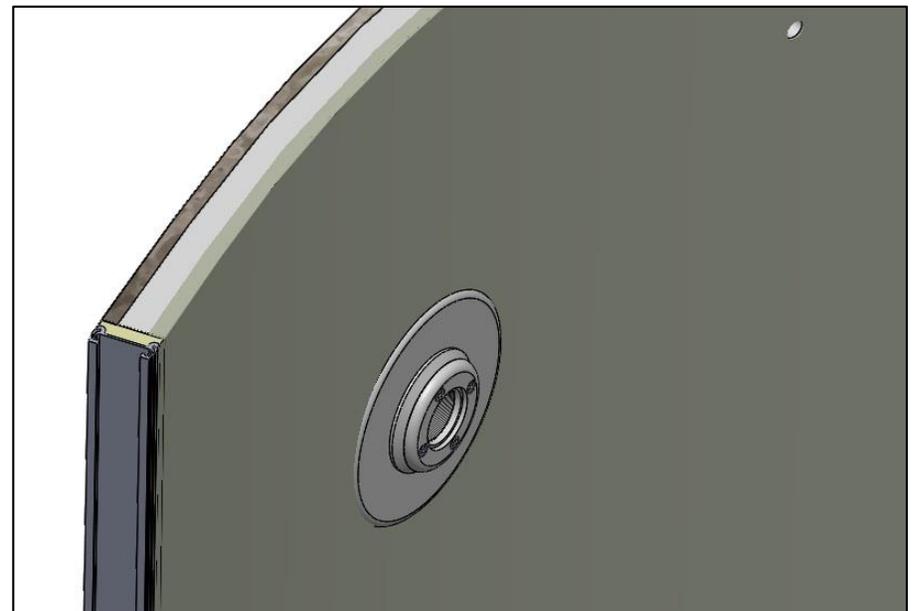
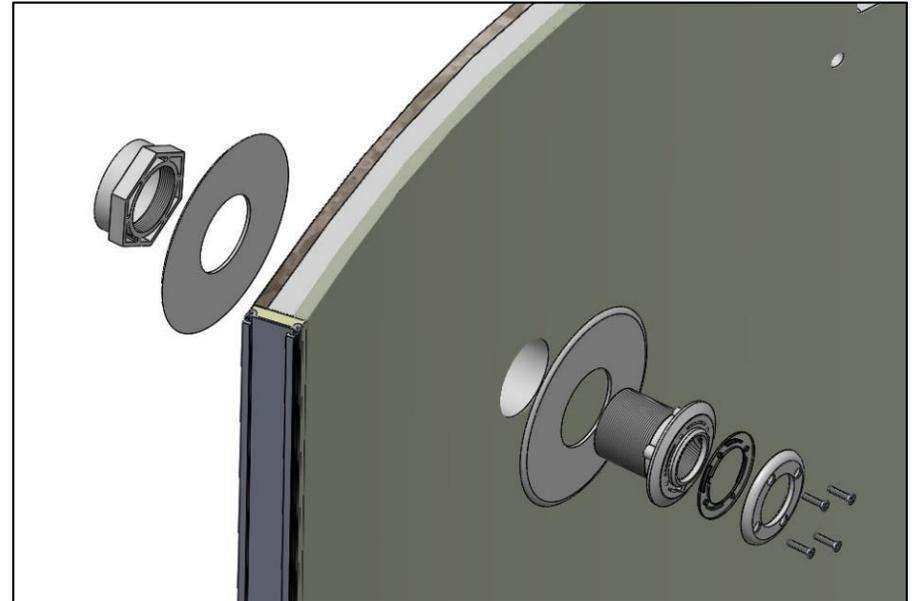
#### Step 12 – Return Fitting Installation

- 12.1 Place white return plate (#77064) over round opening on skimmer panel and insert extended return fitting (#77092) through assembly from interior of the pool.

Place second white return plate (#77064) over extended return fitting on the outside of the pool.

Install extended return fitting nut to secure to panel. Do not overtighten.

**NOTE:** Return fitting face plate and four screws will be removed once pool liner is ready to be installed.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 10 - Installing Top Coping

##### 2" PVC Coping (If Applicable)

10.1 Place 2" PVC Top Coping onto each pool panel, leaving a 1/2" gap between each length. Coping should be offset from wall panel joints by 2" as shown.

10.2 Each length of Top Coping will be attached to the pool with 5 screws from the exterior side of the pool only. Drill evenly spaced 1/8" pilot holes through the Top Coping and exterior pool wall while making sure the Top Coping is fully seated.

Affix the Top Coping to the pool panels with colored head cap screws #8 x 1/2" (#99-0138) taking care not to overtighten.

**NOTE:** Placement of screws should be **at least 4"** from each end of the top coping lengths to ensure easy installation of Coping Clips.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 10 - Installing Top Coping (Continued)

##### In-Ground Coping

10.3 PAVER COPING: Place Coping Adaptor Clips (#77176) around the perimeter of the pool with raised edge facing outward. Space clips 12" on center. **Attach to the exterior pool wall only** with one #10 x 3/4" Tek Screw (#99-0090).

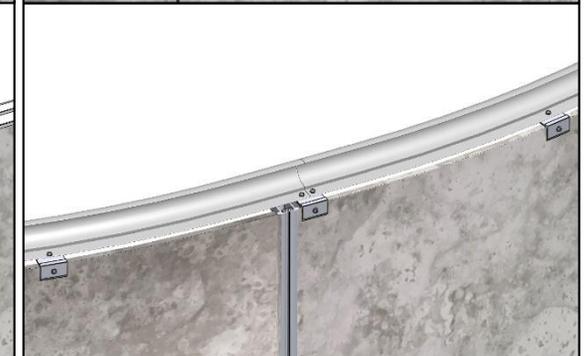
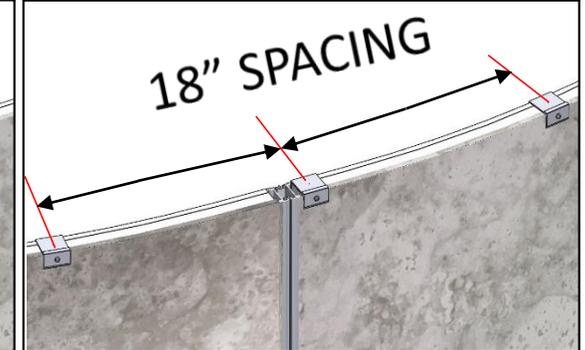
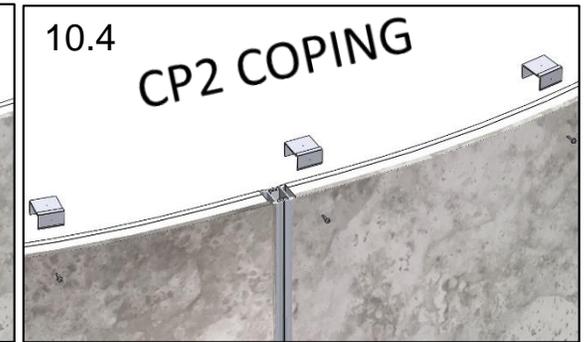
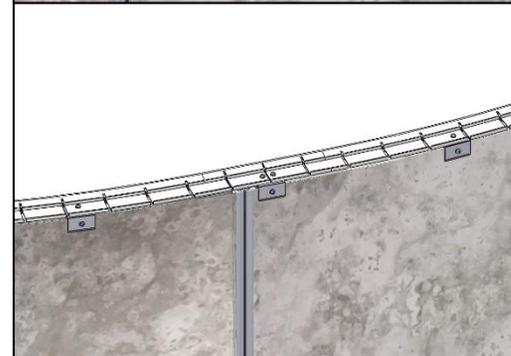
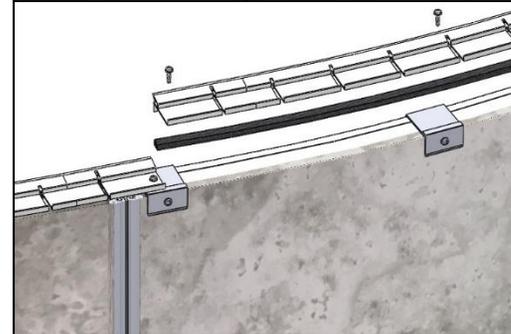
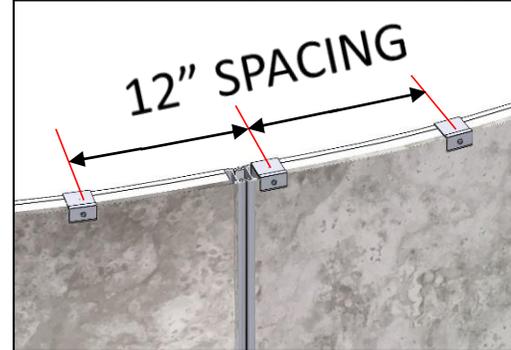
Under each length of paver coping (NOT INCLUDED), place the included Foam Sealer Strip (#77177) under the inside edge as illustrated. This will prevent backfill or debris from falling behind the pool liner.

Use one #10 x 3/4" Tek Screw (#99-0090) to attach the paver coping to each Coping Adaptor Clip.

10.4 CP2 COPING OR DECK COPING: Place Coping Adaptor Clips (#77176) around the perimeter of the pool with raised edge facing outward. Space clips 18" on center. Attach to the exterior pool wall only with one #10 x 3/4" Tek Screw (#99-0090).

Under each length of coping (NOT INCLUDED), place the included Foam Sealer Strip (#77177) under the inside edge as illustrated. This will prevent backfill or debris from falling behind the pool liner.

Use one #10 x 3/4" Tek Screw (#99-0090) to attach the paver coping to each Coping Adaptor Clip.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 11 – Concrete Collar

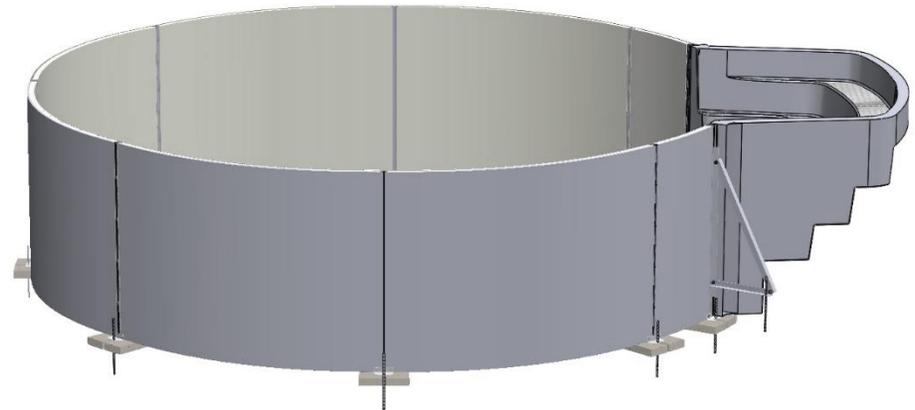
- 11.1 Use the included step footprint for the specific pool size to ensure the layout dimensions are correct and adjust accordingly. Distance between all panel joints should be identical.
- 11.2 Make sure the supplied 3/8" x 15" rebar (#77001) is inserted halfway into the ground through every Anchor Plate hole around the perimeter of the pool. Also insert two lengths of rebar through the hole on the A-frame assembly from step 6.5. If extra supports are required for patio or other pool features, consider installing them before pouring the concrete.

**Note - Double check the pool is level and square before pouring concrete!**

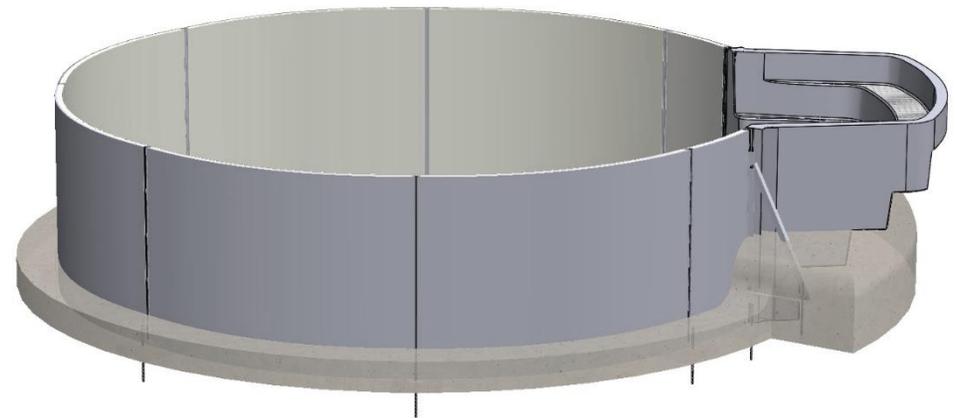
- 11.3 A concrete collar is required on all in-ground pools. Pour 8" high by 12" wide concrete collar around the perimeter of the pool. Pour concrete foundation around the backside of the step. (See footprint for recommended quantity)

**Note: Do not fill with water until concrete has cured.**

11.2



11.3



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 12 – Install liner

12.1 Check sand in pool is level with no impressions.

Remove liner (NOT INCLUDED) from carton then unfold liner outside of the pool.

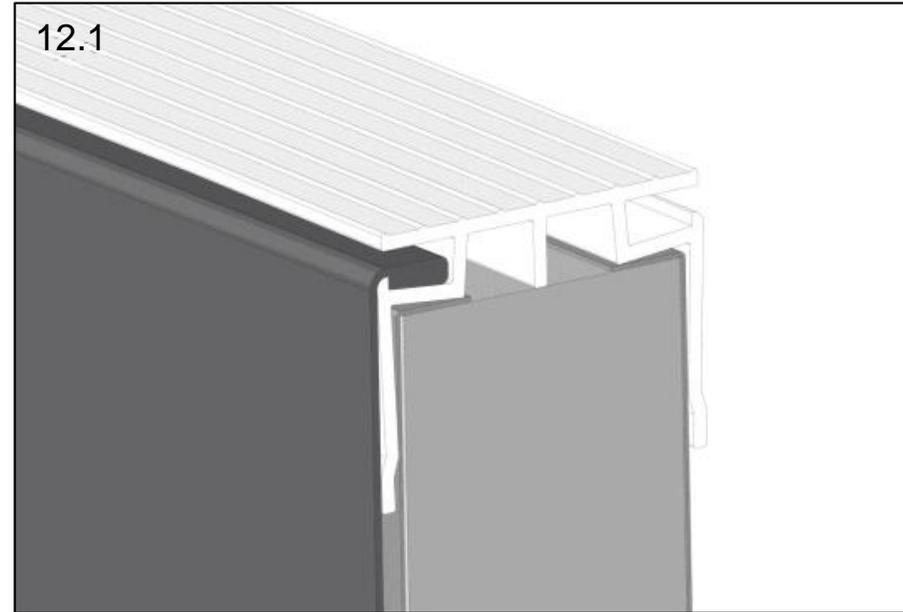
Loosely fold liner and gently place it in the pool, taking care to not disturb the smoothed sand base of the pool.

While standing outside of the pool, snap liner bead into coping receiver track around entire pool. Remove as many wrinkles from the liner as possible as you go by gently tugging on the liner or using a soft broom. A shop vacuum can be used to remove wrinkles by attaching the vacuum hose to the skimmer outlet and sealing with duct tape. Remove vacuum after pool has 6" of water.

#### Step 13 – Install Coping Clips

13.1 2" PVC COPING: Install Coping Clips (#77005) onto top coping by inserting bottom lip first, then snapping into place. Do not screw coping clip into place.

CP2 AND DECK COPING: (NOT INCLUDED) install coping clips by first catching top edge then pressing down firmly to lock in place.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 14 – Add Water

14.1 Start filling the pool with water once the concrete has cured..

Once the water level reaches 2-3" from the Return Fitting, install the Faceplates on the Return Fitting and Skimmer as instructed below.

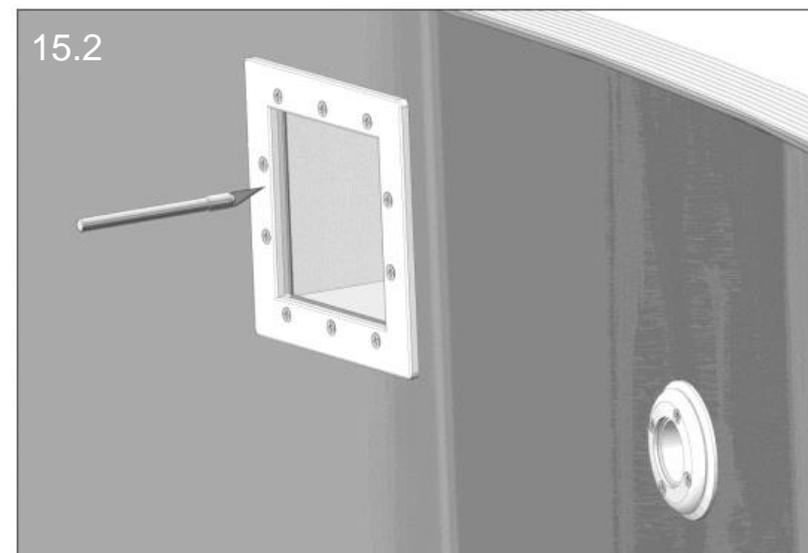
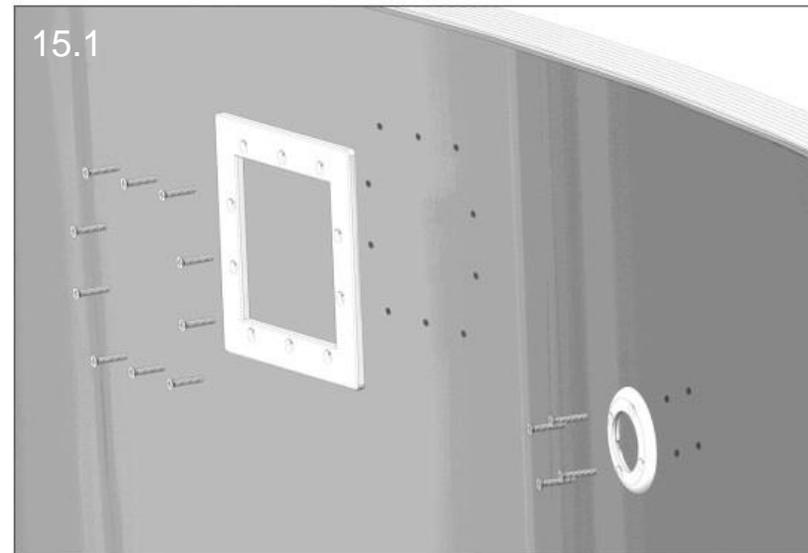
When Faceplates are installed, complete filling the pool until water level is at the middle of the Skimmer opening.

#### Step 15 – Install Face Plates

15.1 Locate screw holes for each opening in pool wall.

Carefully pierce liner with a nail or awl. Attach Skimmer and Return Faceplates using screws provided in the Skimmer Kit, then tighten.

15.2 Using a sharp blade, carefully trim liner inside both the Skimmer and Return openings. Install eyeball (not included) into Return Fitting.



## Section 2

### OPTIMUM ROUND IN-GROUND WITH STEP

#### Step 16 - Backfill

- 16.1 Ensure all electrical bonding required in your area is completed before backfilling the pool. This is a good time to add any concrete foundation forms or perforated drain pipes, if they will be used.

**IMPORTANT:** Before any backfilling is started, the pool water level must exceed the height of the surrounding backfill required, as in examples 13.1 and 13.2. Failure to do so will put excessive inward pressure on the pool panels which may cause irreversible damage, and may void your warranty.

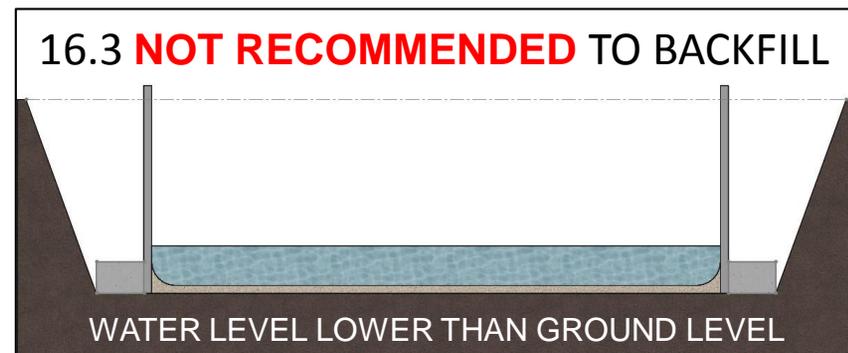
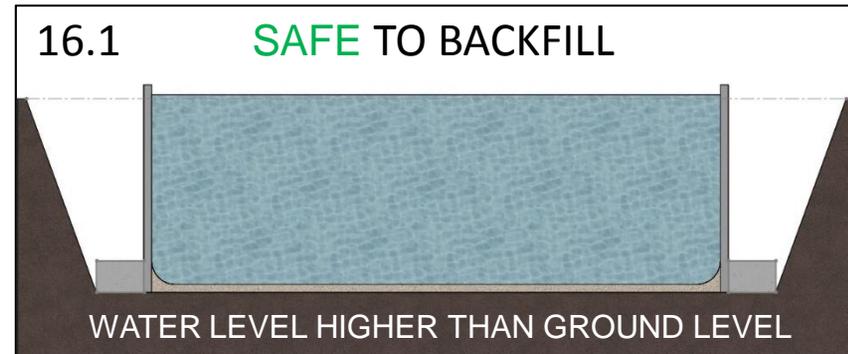
Crushed stone or gravel aggregate, 3/8" to 3/4" in diameter is the recommended backfill material.

Backfill may be placed directly against the pool wall.

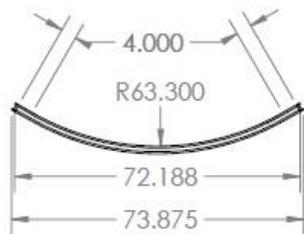
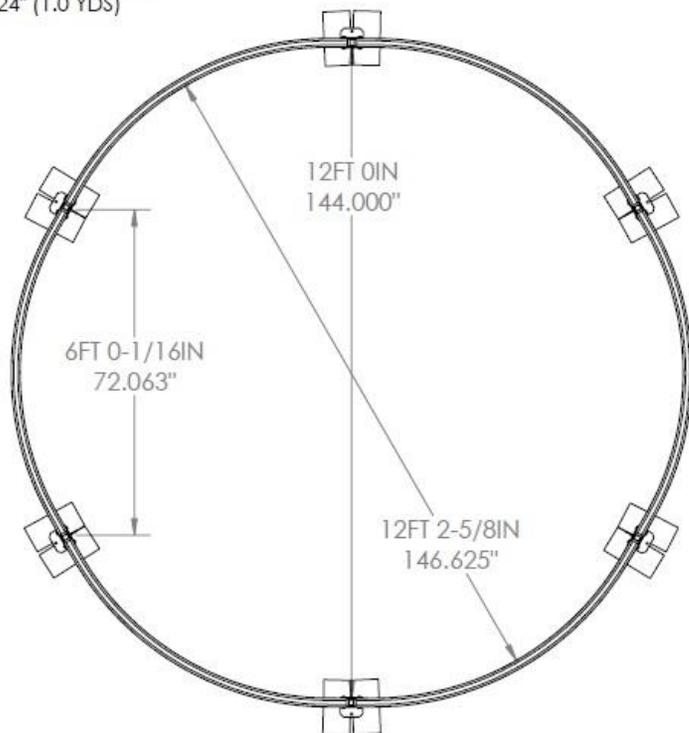
Do not use expansive soils such as clay since this type of soil will place additional stress on the pool and not allow for proper drainage away from the surrounding area.

Only compact the backfill material manually by hand.

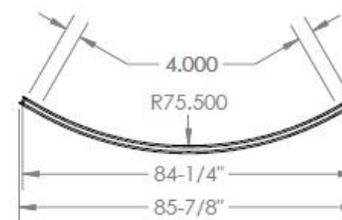
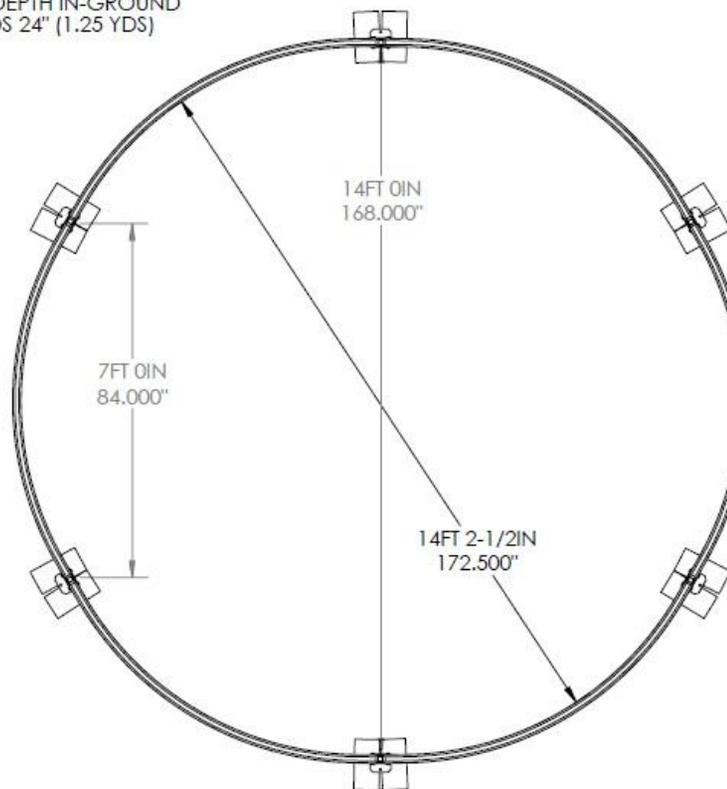
Do not use heavy machinery, especially around the skimmer and plumbing fittings.



CONCRETE REQUIRED  
WHEN DEPTH IN-GROUND  
EXCEEDS 24" (1.0 YDS)



CONCRETE REQUIRED  
WHEN DEPTH IN-GROUND  
EXCEEDS 24" (1.25 YDS)



**WILBAR**  
INTERNATIONAL

### 12 FOOT ROUND

PERIMETER: 37'-8 3/4" AREA: 113 SQ. FT. GALLONAGE: 3,243 GAL. SAND REQ: 0.8 YDS MODEL NO.: POPT52-1200R

SCALE: 1:32 FOAM WALL POOL DATE: 2/26/18 DRAWN BY: P.INMAN DRAWING NO. 10467

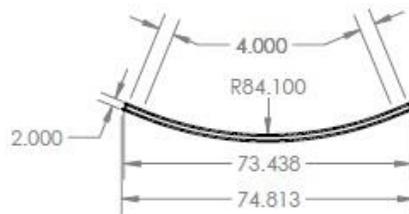
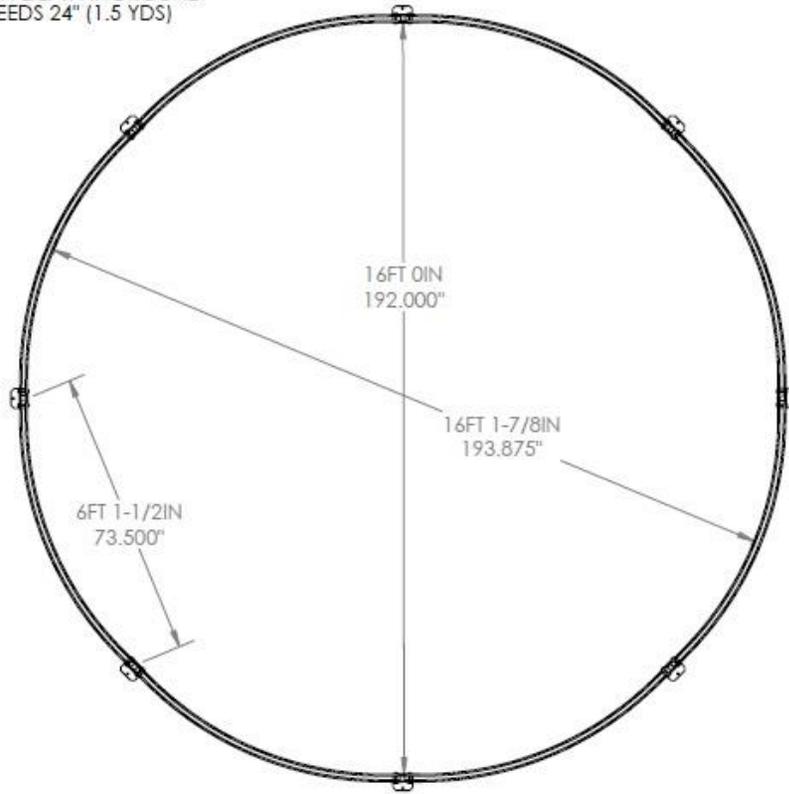
**WILBAR**  
INTERNATIONAL

### 14 FOOT ROUND

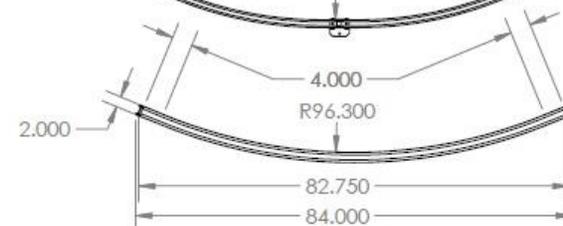
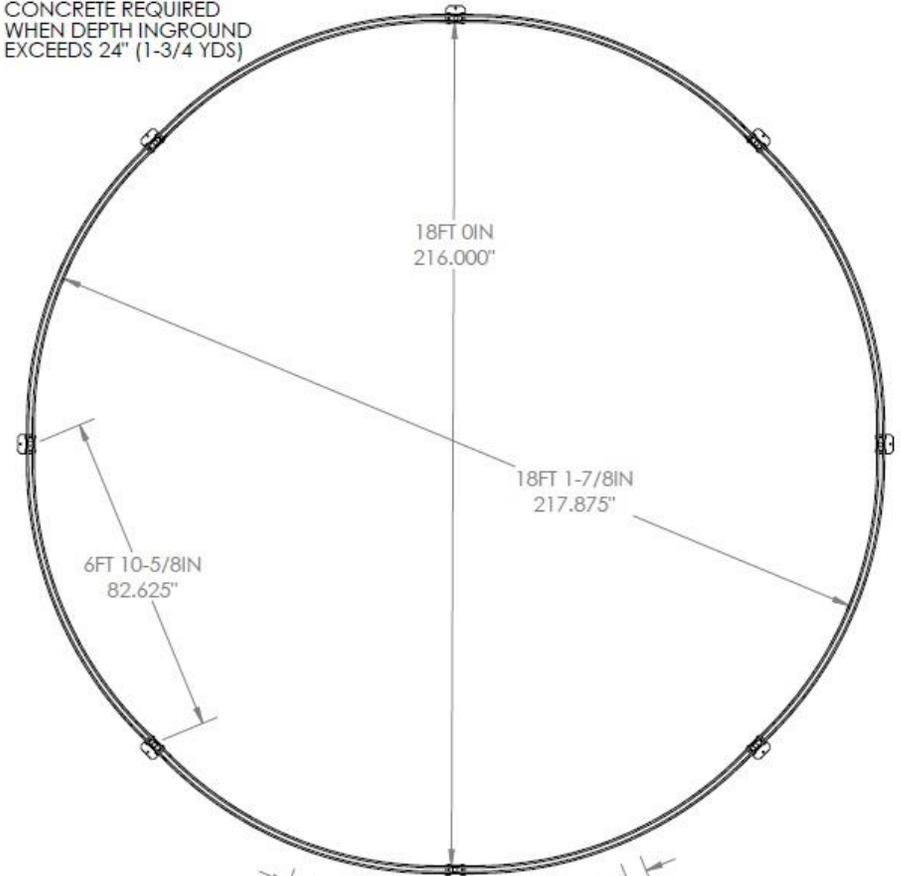
PERIMETER: 43'-11 1/4" AREA: 154 SQ. FT. GALLONAGE: 4,414 GAL. SAND REQ: 1.1 YDS MODEL NO.: POPT52-1400R

SCALE: 1:30 FOAM WALL POOL DATE: 2/26/18 DRAWN BY: P.INMAN DRAWING NO. 10468

CONCRETE REQUIRED  
WHEN DEPTH INGROUND  
EXCEEDS 24" (1.5 YDS)



CONCRETE REQUIRED  
WHEN DEPTH INGROUND  
EXCEEDS 24" (1-3/4 YDS)



**WILBAR**  
INTERNATIONAL

**16 FOOT ROUND**

PERIMETER: 50'-3 1/4" AREA: 201 SQ. FT. GALLONAGE: 5,515 GAL. SAND REQ: 1.5 YDS MODEL NO. POPT52-1600R

SCALE: 1:32 DATE: 12/21/16 DRAWN BY: P.INMAN DRAWING NO. 10360

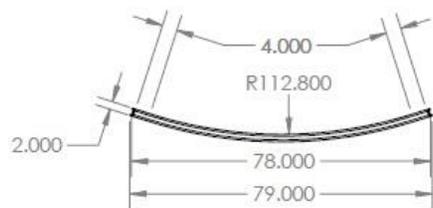
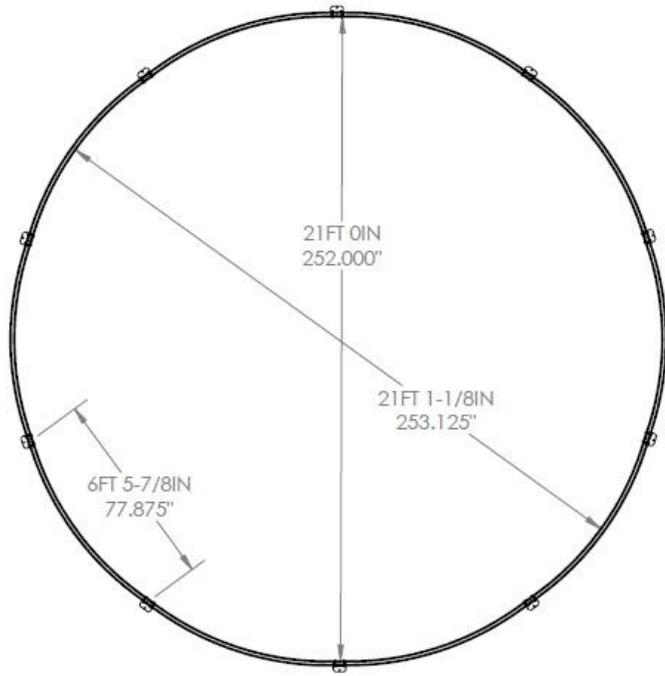
**WILBAR**  
INTERNATIONAL

**18 FOOT ROUND**

PERIMETER: 56'-6 1/4" AREA: 254 SQ. FT. GALLONAGE: 6,980 GAL. SAND REQ: 1.9 YDS MODEL NO. POPT52-1800R

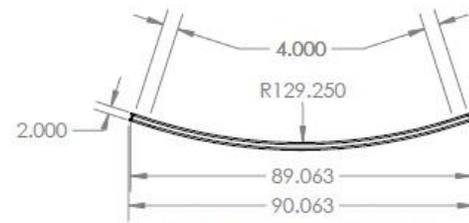
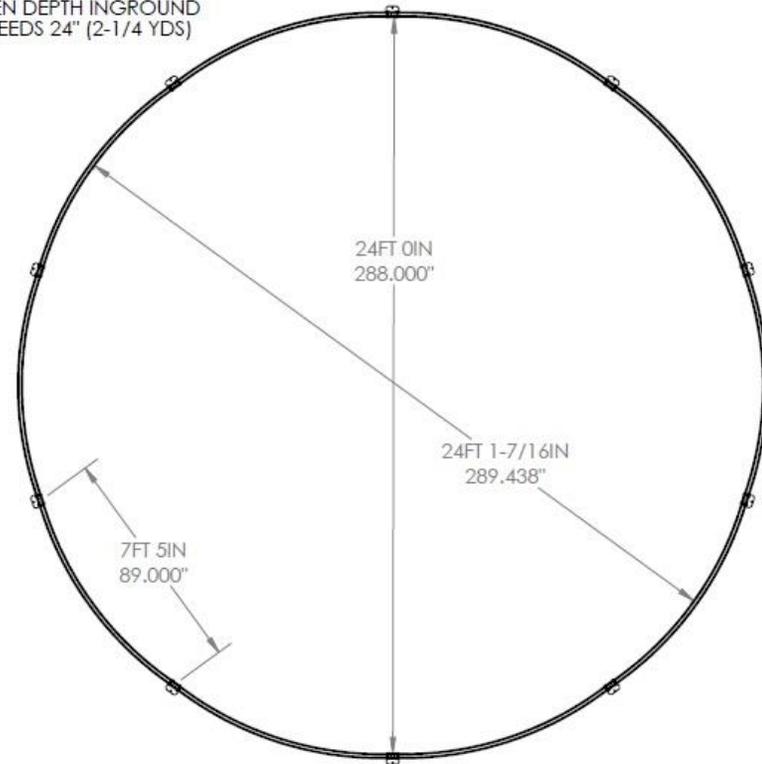
SCALE: 1:32 DATE: 12/21/16 DRAWN BY: P.INMAN DRAWING NO. 10361

CONCRETE REQUIRED  
WHEN DEPTH INGROUND  
EXCEEDS 24" (2 YDS)



DETAILED PANEL VIEW: 1:32

CONCRETE REQUIRED  
WHEN DEPTH INGROUND  
EXCEEDS 24" (2-1/4 YDS)



DETAILED PANEL VIEW: 1:32

**WILBAR**  
INTERNATIONAL

### 21 FOOT ROUND

PERIMETER: 65'-11 1/4" AREA: 346 SQ. FT. GALLONAGE: 9,500 GAL. SAND REQ: 2.5 YDS MODEL NO. POPT52-2100R

SCALE: 1:48 FOAM WALL POOL DATE: 12/21/16 DRAWN BY: P.INMAN DRAWING NO. 10362

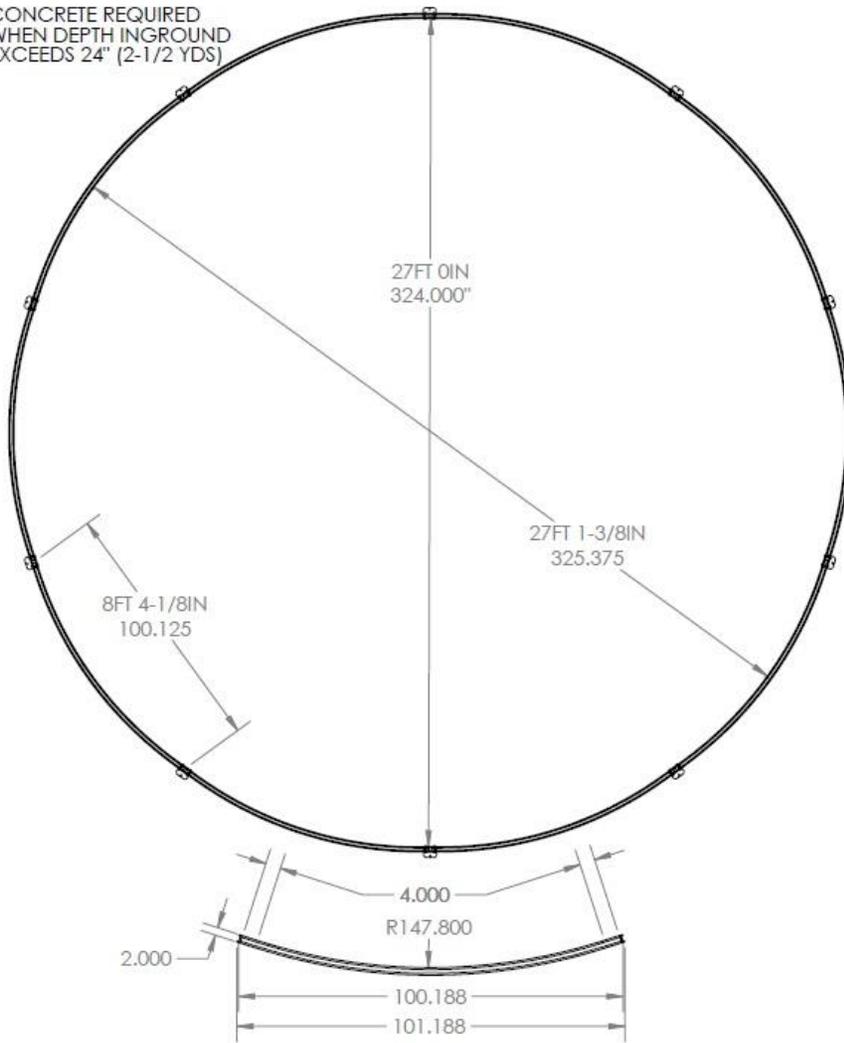
**WILBAR**  
INTERNATIONAL

### 24 FOOT ROUND

PERIMETER: 75'-4 1/2" AREA: 452 SQ. FT. GALLONAGE: 12,408 GAL. SAND REQ: 3.2 YDS MODEL NO. POPT52-2400R

SCALE: 1:48 FOAM WALL POOL DATE: 12/21/16 DRAWN BY: P.INMAN DRAWING NO. 10363

CONCRETE REQUIRED  
WHEN DEPTH INGROUND  
EXCEEDS 24" (2-1/2 YDS)



DETAILED PANEL VIEW: SCALE 1:32

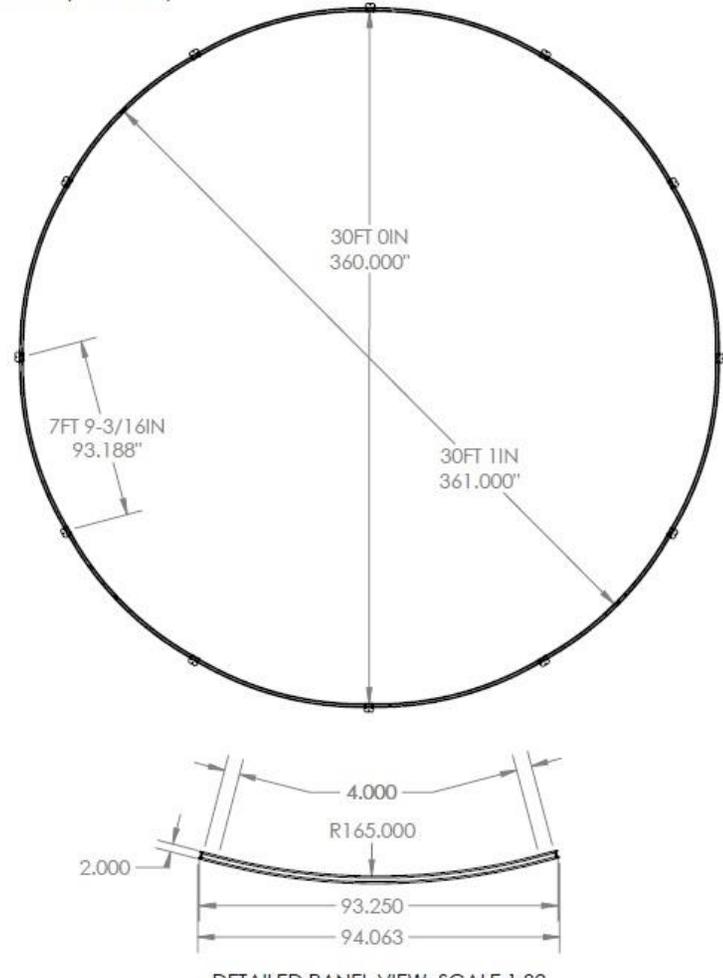
**WILBAR**  
INTERNATIONAL

**27 FOOT ROUND**

PERIMETER: 84' 9-<sup>1</sup>/<sub>8</sub>" AREA: 573 SQ. FT. GALLONAGE: 15,704 GAL. SAND REQ: 4.1 YDS MODEL NO. POPT52-2700R

SCALE: 1:48 DATE: 12/21/16 DRAWN BY: P.INMAN DRAWING NO. 10364

CONCRETE REQUIRED  
WHEN DEPTH INGROUND  
EXCEEDS 24" (2-3/4 YDS)



DETAILED PANEL VIEW: SCALE 1:32

**WILBAR**  
INTERNATIONAL

**30 FOOT ROUND**

PERIMETER: 94' 2-<sup>1</sup>/<sub>8</sub>" AREA: 707 SQ. FT. GALLONAGE: 19,388 GAL. SAND REQ: 5.0 YDS MODEL NO. POPT52-3000R

SCALE: 1:64 DATE: 12/21/16 DRAWN BY: P.INMAN DRAWING NO. 10365