



# 7" & 9" Top Rail Pool Series

## 52" and 54" Oval Pools

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### Installation Instructions

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# Installation Instructions

## WARNINGS

### HOW TO USE THESE INSTRUCTIONS

Be sure to read these instructions completely before beginning assembly or installation.

This installation sheet covers five sizes of oval pools. Use your pool parts list booklet and the exploded illustrations to identify your pool parts, then read these instructions and follow the assembly steps that pertain to your pool assembly.

The manufacturer (Hill) cannot be responsible for damage caused by careless or improper assembly or installation. Your warranty is void if pool assembly and installation instructions are not followed exactly, or if the pool design is altered in any way.

### Contracted Installation

The manufacturer (Hill) is not affiliated with any professional pool installers and can assume no responsibility for installation mistakes made by the professional installer or the homeowner. If the pool is installed by others, please supervise and make sure the installation complies with proper installation techniques as shown.

### Change of Design

The manufacturer (Hill) expressly reserves the right to change or modify the design and construction of any product in due course of our manufacturing procedures, without incurring any obligation or liability to furnish or install such changes or modifications on products previously or subsequently sold.

## CAUTIONS

1. Do not attempt to install pool wall on windy days. An unsupported pool wall can easily blow down and may cause damage to the pool frame, pool wall, or may cause personal injury.
2. When assembling your pool, keep parts not currently used in an area out of the way. Disassembled parts are easily tripped over and may be damaged or cause personal injury.
3. Do not attempt to lift heavy boxes by yourself. To reduce the possibility of personal injury, have someone help you move heavy boxes (pool wall, liner, etc.).

1. Your pool must be level within 1" all around. An un-level pool may cause excessive stress on pool frame. This may result in pool failure which could cause serious personal injury.

2. Your pool must be on undisturbed soil. Backfilled soil, sudden slopes within 6 feet, or water run off may undermine or cause pool foundation to shift. This could cause pool failure and may cause serious personal injury.

3. To reduce the risk of severe electrical shock, always have a qualified electrician install a ground fault circuit interrupter (G.F.C.I.). Always plug pool accessories into a G.F.C.I. protected receptacle.

4. Always install the Warning Decals and Warning Sign. The decals are designed to remind you, your friends and loved ones that your pool is to be used for swimming and wading only. Do not allow any form of horse play in or around the pool. Failure to follow this warning can lead to severe personal injury. Read the "Safety First" booklet.

5. Do not use common sand for pool cove. Common sand can easily erode and allow pool liner to rupture which may cause pool failure or personal injury.

6. Secure your pool when not in use. Ladders and gates should be secured to reduce the possibility of unauthorized entry and possible serious accidents.

7. Always repair liner leaks. Continued leakage between pool wall and liner may cause wall damage which eventually may result in pool wall failure. This could result in serious personal injury.

8. To reduce the risk of possible electrical shock, never install your pool under overhead wires.

9. Do not alter pool as pool failure may result and cause serious bodily injury. Your warranty is void if the pool is altered.

10. Do not bury pool or warranty is void.

11. Do not install a diving board, pool slide or any other recreational accessories for use in diving, sliding or jumping into your pool.

## Local Codes

Check to see if building permits or utility clearances are required. Comply with safety codes regarding fencing and all electrical codes.

## BEFORE YOU START

1. Check prevailing winds. The skimmer should be downwind to aid in removing pool surface debris.
2. Pump and filter location. Allow room to service your pool equipment.
3. Do not install your pool liner on top of anything abrasive. Installing your liner on top of abrasives such as concrete, asphalt, peat moss, tar paper, gravel, or wood could puncture your liner.
4. Do not install your pool liner on top of grass or tree roots. They may grow up through your liner.
5. Do not install your pool on soil that has recently been treated with **petroleum based chemicals**. Some soil treatment chemicals may destroy your pool liner. Consult your pool dealer.
6. Treat the ground inside the pool area with a **non-petroleum based** fungicide (available at garden supply shops). This may help prevent liner staining caused by fungus. Consult your pool dealer.
7. Rid pool area of burrowing pests and insects such as gophers and termites. They can cause liner damage.
8. Locate a convenient electrical outlet for filter and pump. Always have a qualified electrician install a ground fault circuit interrupter (See Warnings).
9. Check wall clearances. Be sure you have enough room to work around your pool (18" minimum).
10. Avoid overhanging eaves. Prevent water running off of roof and carrying debris into your pool.
11. Avoid overhanging branches. Prevent leaves and tree branches from falling into your pool.
12. Avoid sun reflection into residence in order to prevent glare into house.
13. Keep sprinklers away from pool to avoid pool damage.
14. Do not install pool under overhead wires (See Warnings).
15. Be able to view children playing around pool. Secure your pool when not in use (See Warnings).

## MATERIAL REQUIRED

### 8" x 8" x 16" concrete blocks

- 20'x12' - 4 blocks
- 24'x12' - 6 blocks
- 26'x15' - 6 blocks
- 30'x15' - 8 blocks
- 24'x16' - 4 blocks
- 28'x16' - 6 blocks
- 32'x16' - 8 blocks
- 33'x18' - 8 blocks
- 34'x18' - 8 blocks
- 41'x21' - 10 blocks

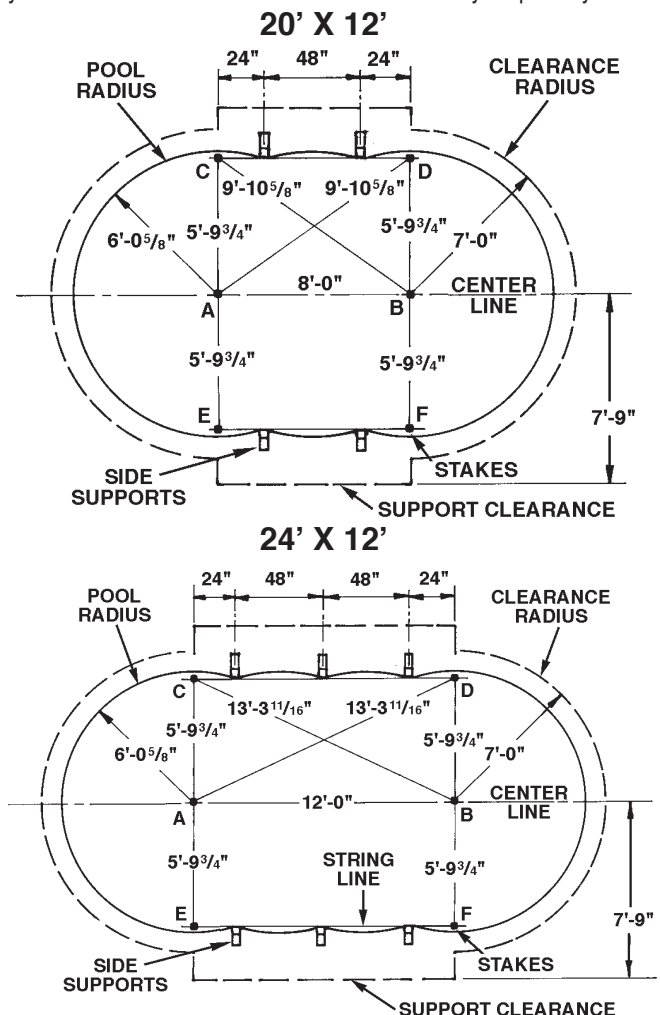
Quick set cement 60 lb bags  
1/2 bag per side support

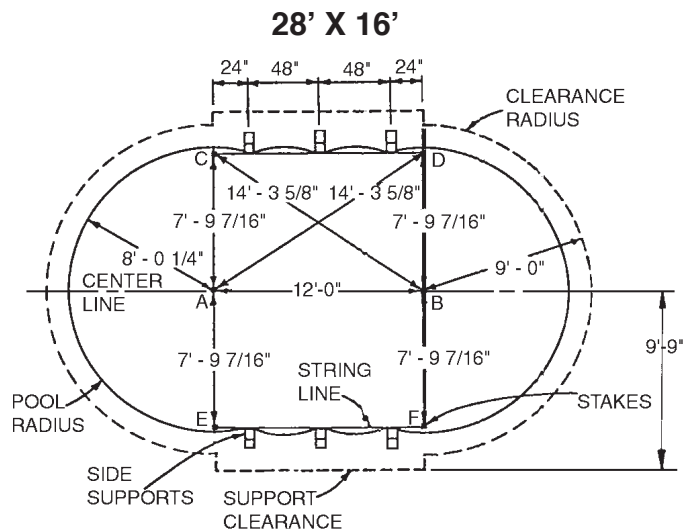
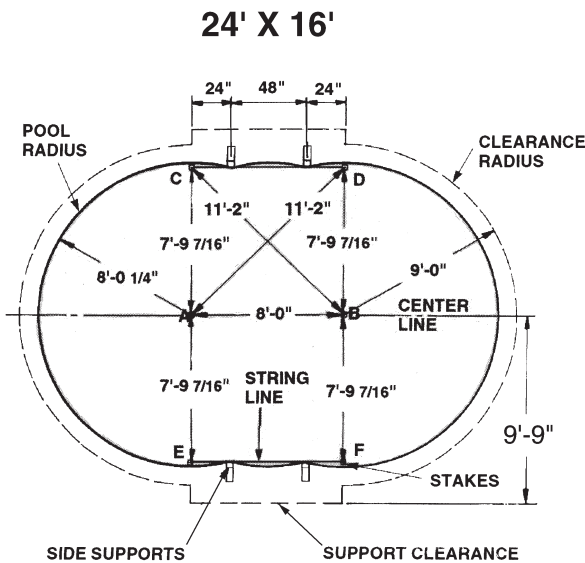
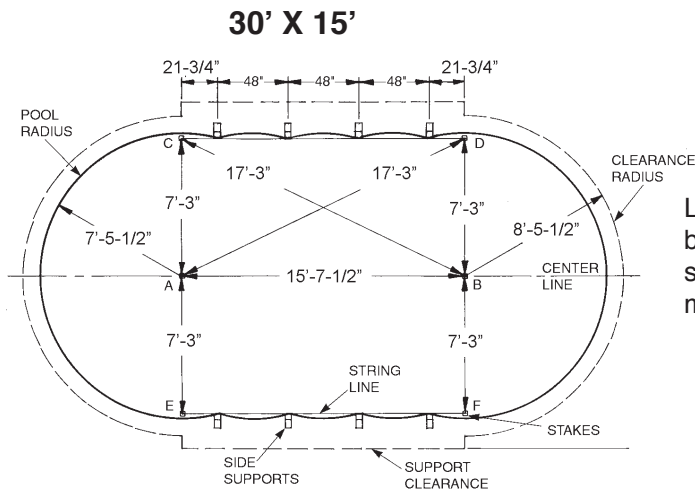
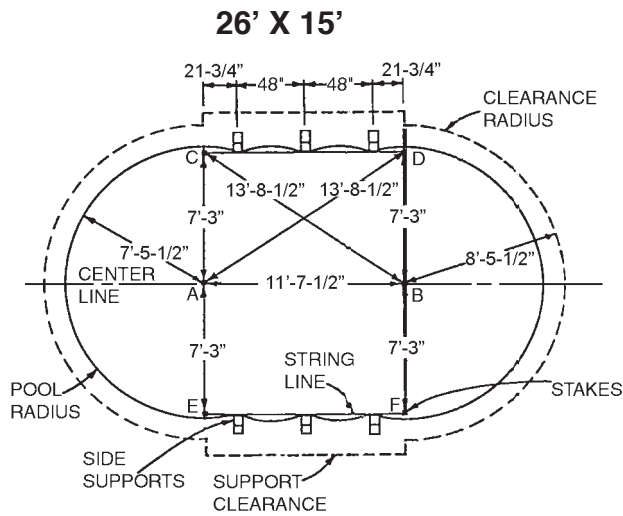
## TOOLS AND MATERIALS:

1. Non-Stretch Twine
2. Garden Rake
3. Nail -- 2-1/2" Long (12 Req'd)
4. 18" Long Wooden Stake (12 Req'd)
5. Duct Tape
6. 2" x 4" Board equal in length to the pool clearance radius plus 6 inches (See "Pool Layout Dimensions")
7. Sifting Screen (to remove 1/8" pebbles)
8. 2"x12"x12" Patio Blocks. (Optional) One per Vertical
9. Binder Clips - 1 1/4" - 2" (Available at stationary stores)
10. Carpenter's Level
11. Carpenter's Saw
12. Flat End Shovel
13. Screwdrivers (Standard)
14. 25' Tape Measure
15. Hammer
16. Tamping Tool or Roller
17. One or more 5/16" Nut Drivers
18. Sharp Knife or Razor Knife
19. Black Felt Marker
20. Transit (See Step 2)
21. 7/16" Open End Wrench (2 Req'd)
22. 9/16" Open End Wrench (2 Req'd)
23. Hacksaw
24. Drill/Bit

## POOL LAYOUT DIMENSIONS

Study the following illustration of your pool size and familiarize yourself with the dimensions that will be used for your pool layout.





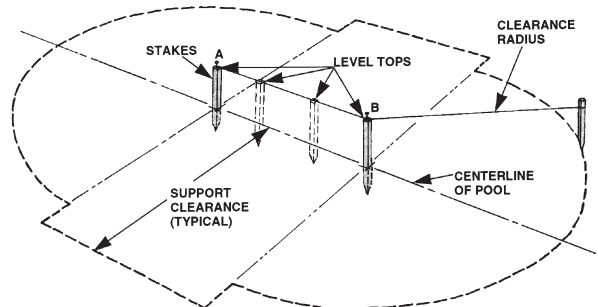
## SITE PREPARATION

A level pool area is a vital part of your pool construction. Avoid possible disassembly later by taking your time and making sure the pool area is leveled properly.

### WARNING

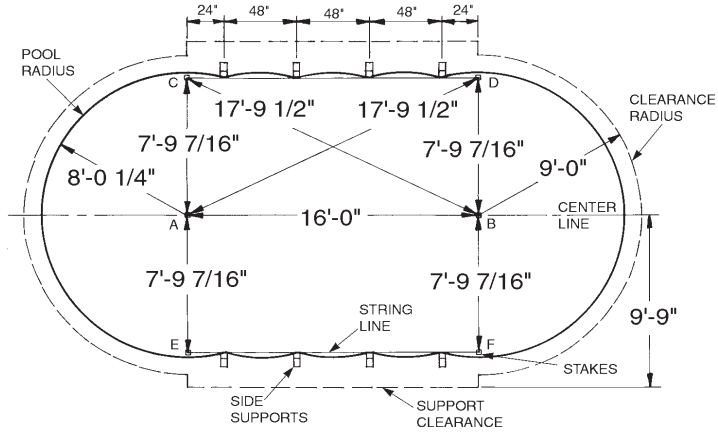
An unlevelled area may cause excessive stress on the pool's wall and framework, and may result in pool failure. See Warnings. Refer to "Pool Layout Dimensions" for your pool diameter.

## Step 1 ... POOL LAYOUT

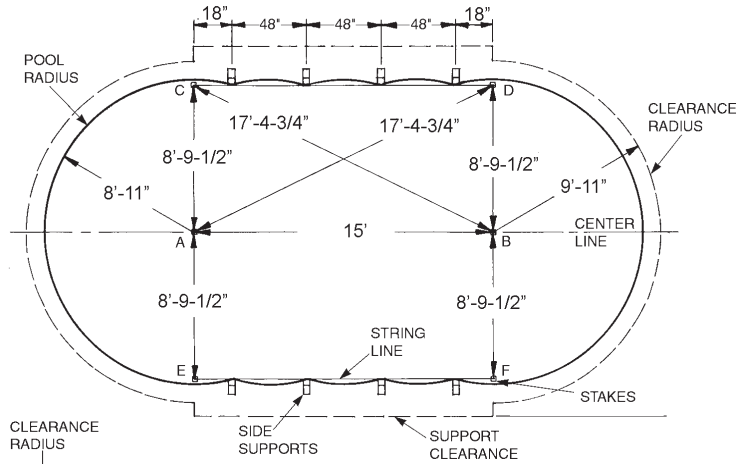


Locate stakes A and B. Level tops with long 2" x 4" board and carpenter's level. Layout clearances as shown. Remove all sod within pool area. This sod may be saved for future landscaping needs.

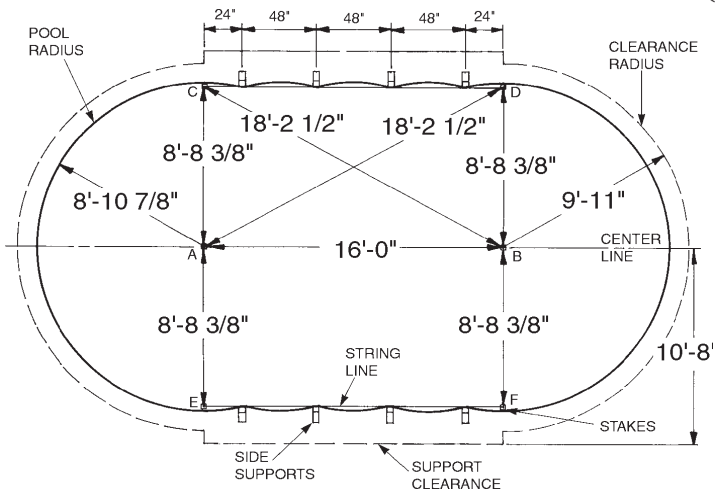
### 32' X 16'



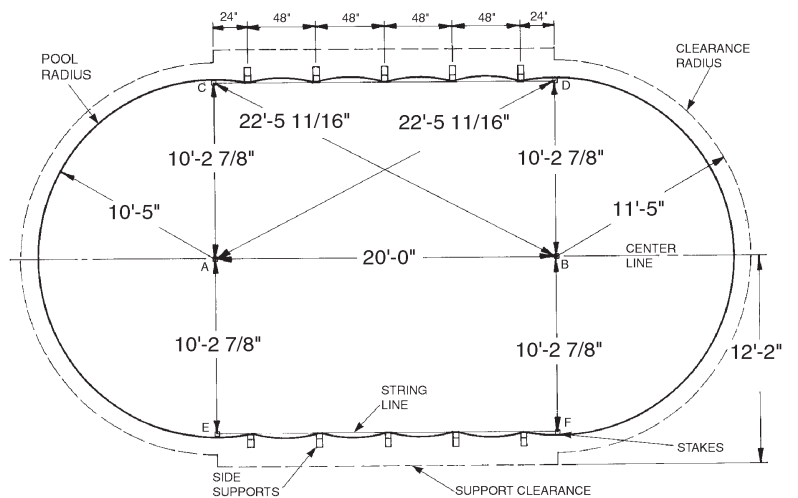
### 33' X 18'



### 34' X 18'

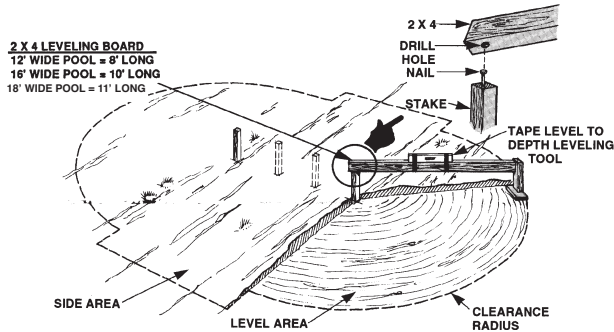


### 41' X 21'



## Step 2 ...

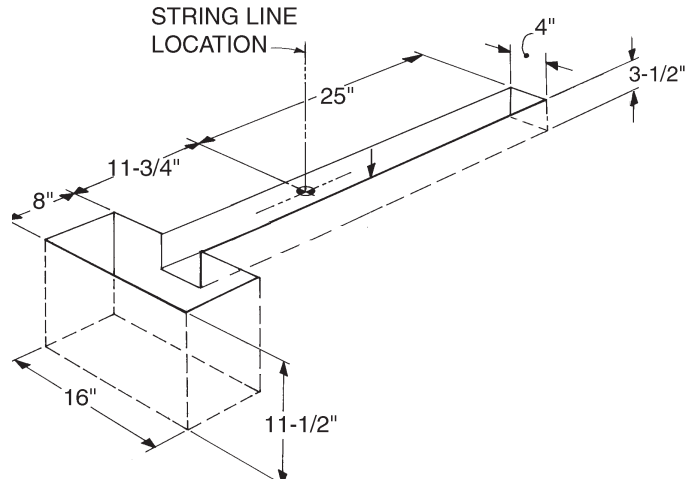
### GROUND LEVELING



Using a transit to level the pool area is preferred. When using this method, professional assistance is recommended. However, a homemade leveling device can be used. With a shovel and the constructed depth leveling tool shown above, remove sod and level pool area. Level to the lowest spot within pool area. Level side areas to main pool area. **Remove high points - do not fill in low spots.** Ground must always be firm. Be sure pool area is free of stones, sticks, roots and other objects that could puncture liner. **Remember:** The entire assembled pool framework must sit on flat ground within 1 inch of level at opposite sides. Spend additional time now to avoid disassembly later.

Refer to Parts List and exploded view for descriptions and parts reference.

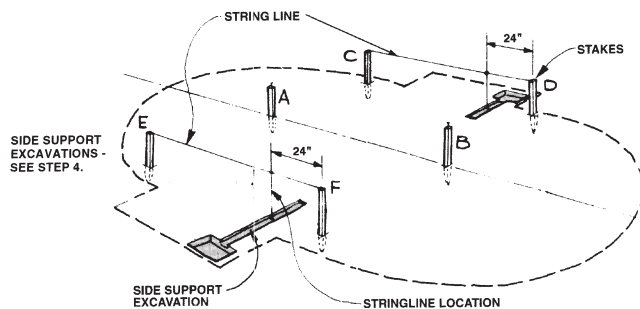
## Step 4...SIDE SUPPORT EXCAVATION



Carefully dig out side support trenches following dimensions above. Dig out side support trenches for the amount of side supports for your pool, refer to pool layout. It is very important that the trench walls remain firm and undisturbed during and after excavation. **DO NOT** over-excavate with the thought of back-filling later as the side supports will move when pool is filled and pool failure may result. When digging is complete, proceed to side support.

## Step 3...

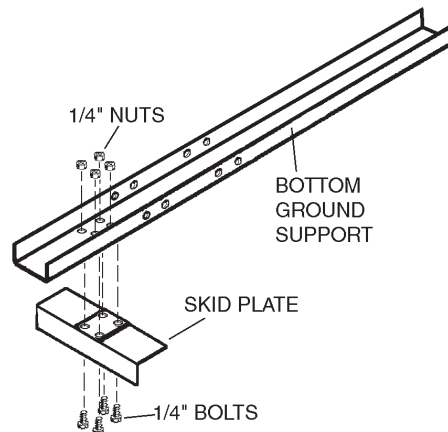
### STAKES AND STRING LINES



Locate stakes C, D, E and F from your pool layout. Attach strings between C and D, then E and F. Locate center of two side support excavations as shown. Other supports will be located 48" on centers if you desire to excavate at this time.

## Step 5...SIDE SUPPORT ASSEMBLY

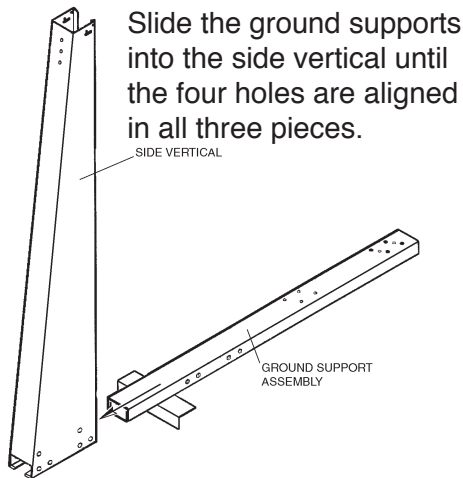
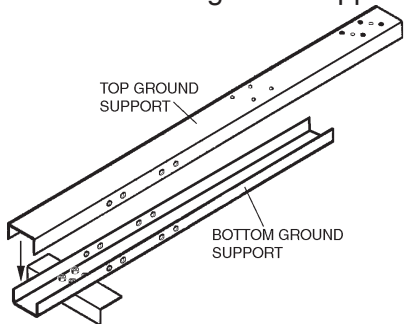
Refer to parts list exploded view in your parts list for correct hardware and parts. Attach skid plate to bottom ground support using (4) 1/4" bolts and nuts as shown. Tighten securely using two 7/16" wrenches.



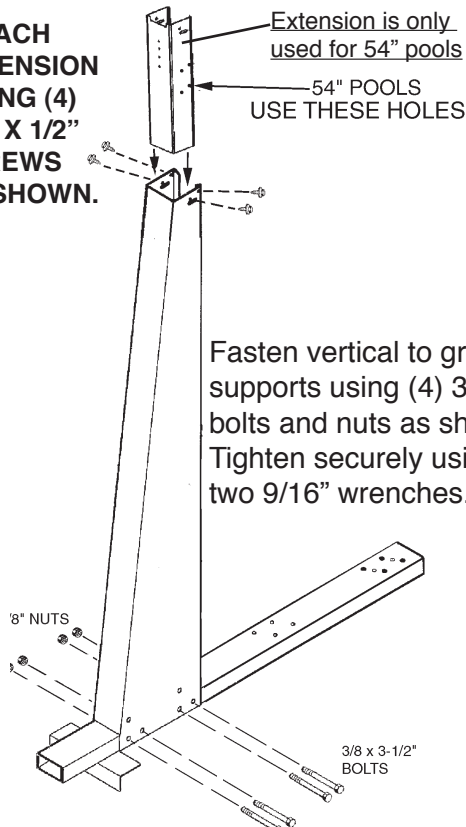


## SIDE SUPPORT ASSEMBLY CON'T

Position the top ground support over the bottom ground support and lower it to enclose the bottom ground support.

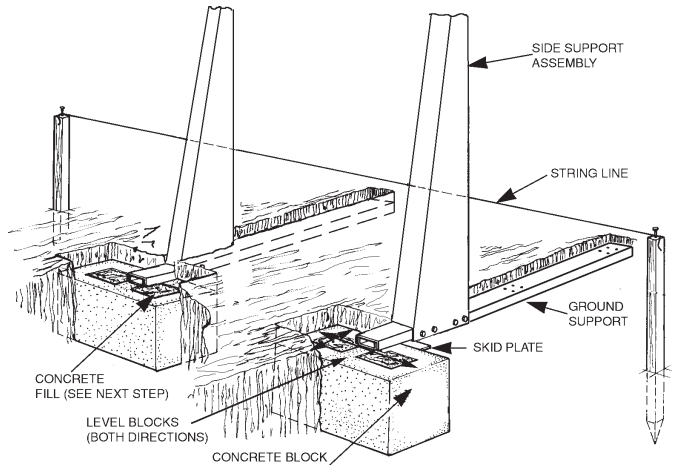


### ATTACH EXTENSION USING (4) #10 X 1/2" SCREWS AS SHOWN.



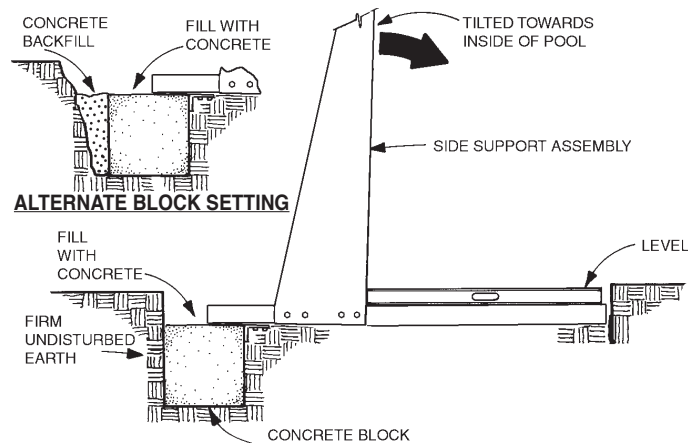
Fasten vertical to ground supports using (4) 3/8" bolts and nuts as shown. Tighten securely using two 9/16" wrenches.

## Step 6...INSTALL CONCRETE BLOCKS



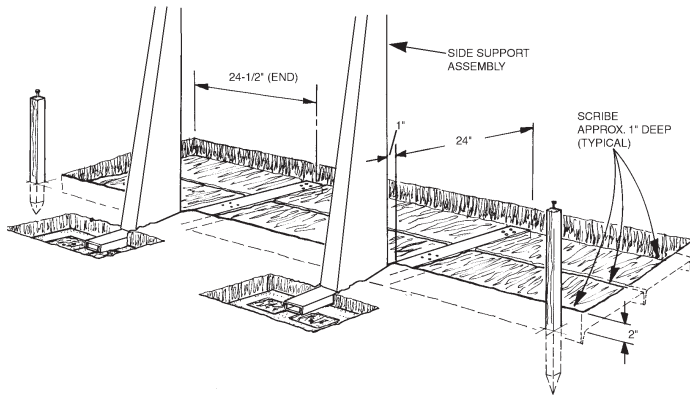
Remove string line. Place concrete blocks into the excavations as shown. NOTE: The thicker wall side of the cement blocks must face up. Level the blocks in both directions. Place the assembled side supports into each trench with skid plate resting firmly against the face of the concrete blocks. Check each ground support for level.

## Step 7...COMPLETE BLOCK INSTALLATION



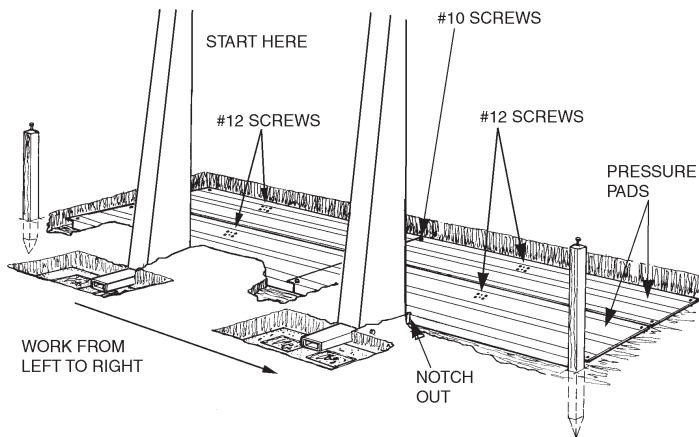
Position a 24" carpenter's level on top of the ground supports. Adjust the side vertical assemblies until the ground supports are level. When ground supports are level, the vertical will be TILTED-IN at the top to provide a "preload" condition so that when the pool water pressure is against the wall, the sides will move outward and become vertical. Without this preload, the wall would tilt outward at the top and create a curve in the top rails. **Fill concrete blocks with concrete mix and level with top of blocks. If you have over excavated, fill any space behind the blocks with concrete. See ALTERNATE BLOCK SETTING above.**

### Step 8...DIG OUT FOR PRESSURE PADS



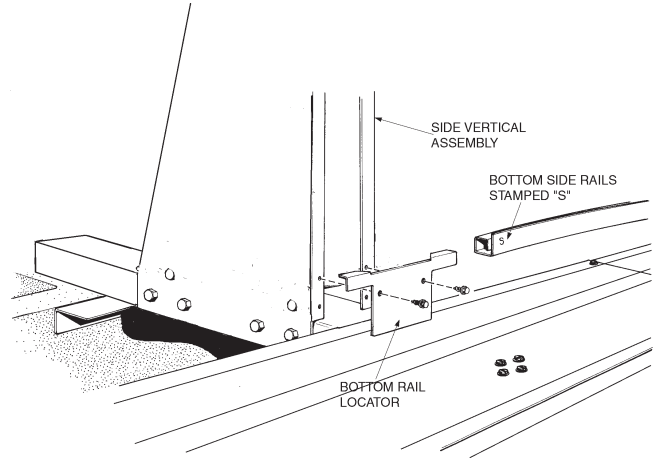
Dig out a trench to the dimensions shown above., grading to the ground support. Use a large screwdriver to scribe grooves (approximately 1" deeper) down each side and center of the trench to accommodate the pressure pads' flanges. Remove the excess dirt accumulated from scribing.

### Step 9...INSTALL PRESSURE PADS



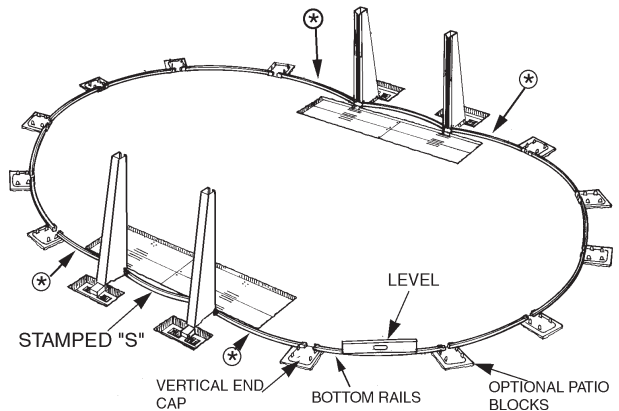
Keep the tops of the ground supports free of dirt. Working from left to right, assemble a set of pressure pads to each ground support using (6) #12x3/4" screws as shown above, refer to your parts list as needed. Tighten screws firmly. Assemble each pressure pad set to its adjacent set using (4) #10x1/2" screws. **DO NOT OMIT ANY SCREWS.** The skid plate at the bottom of the side support assembly must fit firmly against the concrete block and the pressure pads must be flat on the ground with the flanges pointing down into the scribed grooves.

### Step 10...INSTALL BOTTOM RAIL LOCATOR



Loosely assemble bottom rails (stamped "S"), groove up, between verticals with bottom rail locators. Secure bottom rail locators to side verticals with screws. Slightly bend the bottom rail locator tabs towards the outside of the pool. **NOTE:** Be sure to use the top set of holes in the side verticals when assembling the bottom rail locators.

### Step 11...INSTALL BOTTOM RAILS

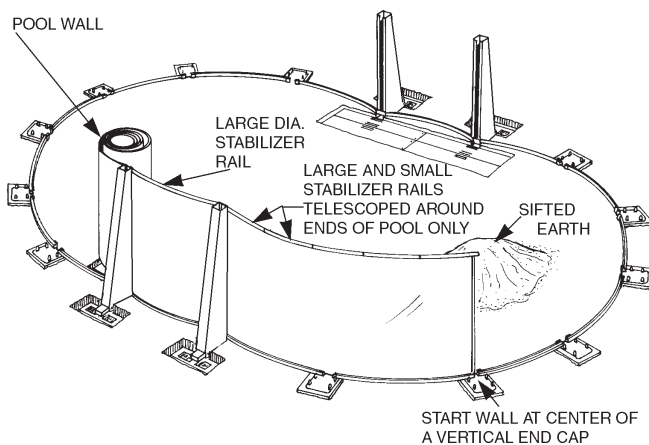


Transition rails, note location on diagram above (\*) Begin ends of framework by installing the four rails (\*) stamped 12 for 12' wide ovals, stamped L-15-2 for 15' wide ovals, stamped TR-18 for 18' wide ovals, stamped TR for 16' & 21' wide ovals, place to the outside on the end side verticals. Rails stamped "S" go between each side vertical and the remaining rails are for the ends. Pay close attention when installing transition rails, these rails must be installed by the outside edge of each side support vertical. Complete ends by sliding bottom rails (groove up) into vertical end caps. Confirm levelness of installation by placing level on top of bottom rails. Check around the oval to be sure ground is flat and within 1 inch of level at opposite sides and ends of pool.



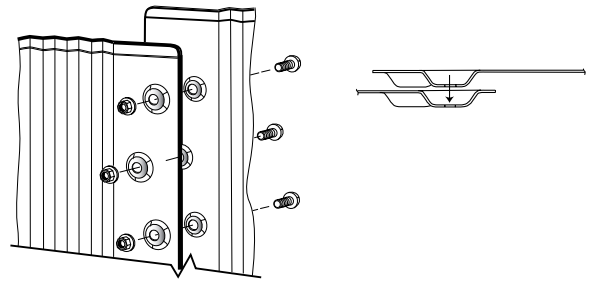
**Patio Block Installation (optional but recommended):** Center 12" x 12" x 2" patio blocks under vertical end caps around ends of pool and mark their positions with a stick. Move bottom framework from ends out of your way in sections. Turn patio blocks out next to their marked positions. Dig soil in the marked locations away to the depth of the patio block. Patio blocks must sit in solid, undisturbed earth, and be flush with level ground, and have no movement when turned back into place. Use leveling tools and/or transit to make sure each block is level and that all blocks are level to each other. NOTE: If you plan to use sifted earth for pool cove, bring it into pool area at this time. Reinstall bottom framework. Check again for levelness, and to see that vertical end caps are centered on patio blocks. Remove stakes C, D, E and F. NOTE: If you will be installing a maindrain, re-

### Step 12... INSTALL WALL



From this point you will need approximately 8 to 10 uninterrupted working hours. It is essential that your pool assembly be completed with top rails and pool filled with water or damage could occur. Remove pool wall from carton. Note "Up" arrow on wall. Keep hands and feet from under wall during construction. Determine starting point of wall with respect to the desired skimmer location. The skimmer opening will be at the inside end of the wall coil. Always start wall at center of a vertical end cap. Uncoil about 6 to 10 feet of wall and insert bottom edge into groove in bottom rails. Place stabilizer rails on top edge of pool wall, working around top of pool as wall is inserted into bottom rails. Telescope small diameter rail into large diameter rail about 6 inches. Secure stabilizer rails to wall with duct tape between vertical end caps. NOTE: Place enough sifted earth into the pool area to cover the pressure pads and to form the cove if not using preformed cove.

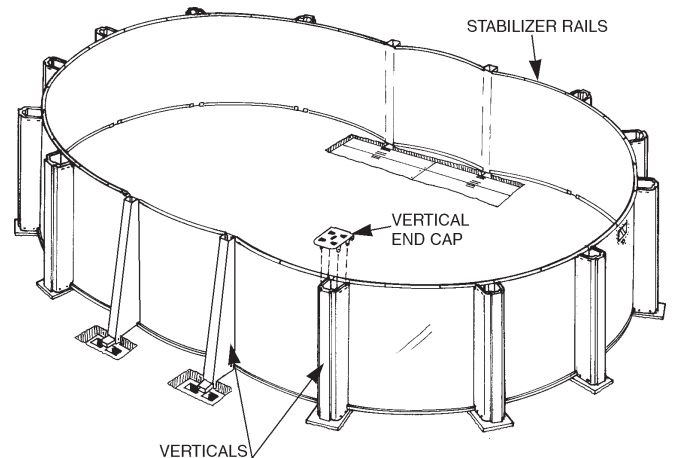
### Step 13...CONNECT WALL JOINT



Bring the wall ends together in the center of the vertical end cap. If interlocking wall ends do not meet, adjust all vertical end caps in or out uniformly as required. Do not make the total adjustment with only one or two vertical end caps. Fasten wall with screws supplied in wall carton. Screw head must be on the inside of pool. When finished, go back and retighten all screws and nuts. Remove any burrs on all screw heads. Place protective vinyl strip, included in hardware pack, over screw heads and tape in place.

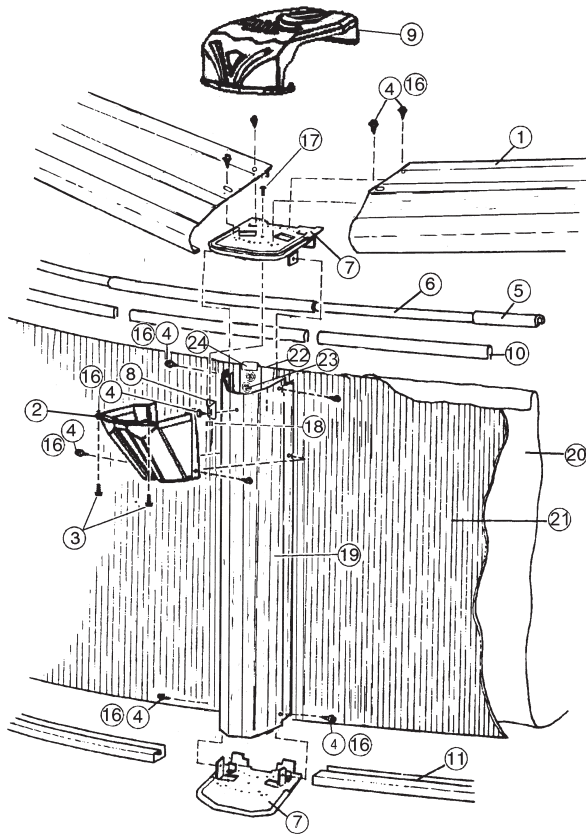
### Step 14...INSTALL END VERTICALS

Refer to your Pool Parts List exploded view when assembling verticals. Attach verticals to bottom connectors, making sure they are straight. Refer to Fig. A or B. Carefully follow the details shown in parts list to

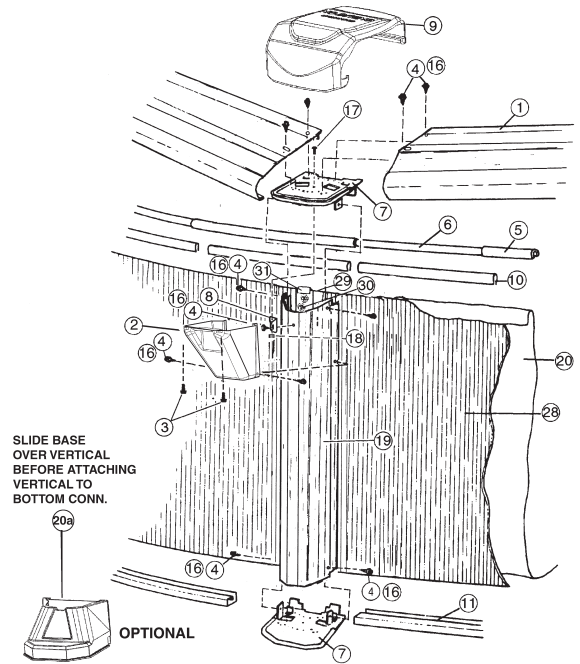


Carefully follow the detail in the exploded view to attach the verticals to vertical end caps to pool. Refer to your Pool Parts List exploded view when assembling verticals. Attach vertical at bottom first. Push vertical against wall, slip vertical end cap over wall and attach to vertical. Make sure vertical is straight. Attach other hardware as required in exploded view. Use all necessary hardware.

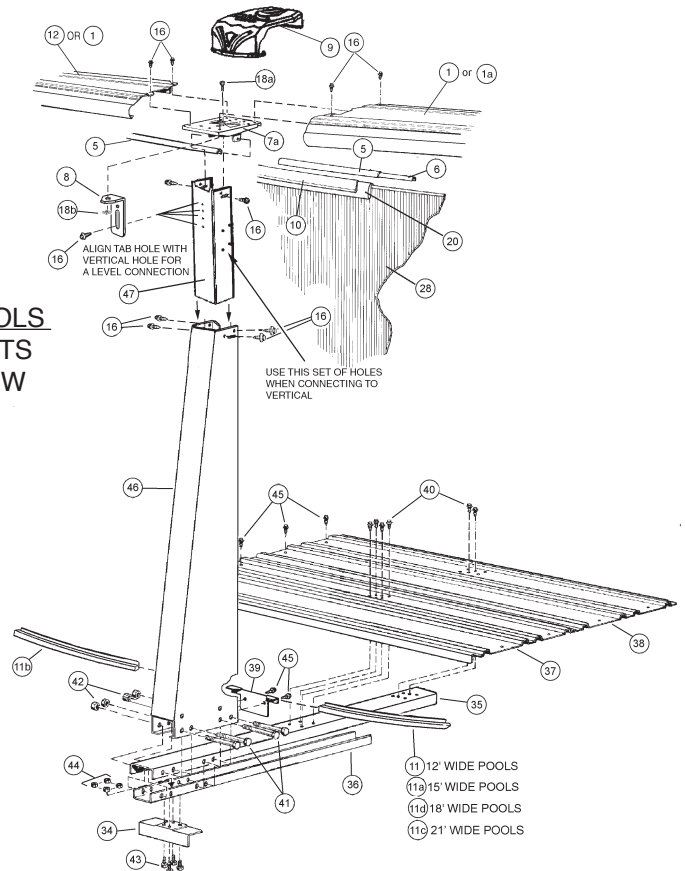
**Exploded view** - Refer to owner's guide for more detailed view.  
**Fig. A**



IF YOUR POOLS EXPLODED VIEW IS NOT SHOWN, PLEASE REFER TO THE PARTS LIST INCLUDED WITH YOUR POOL.



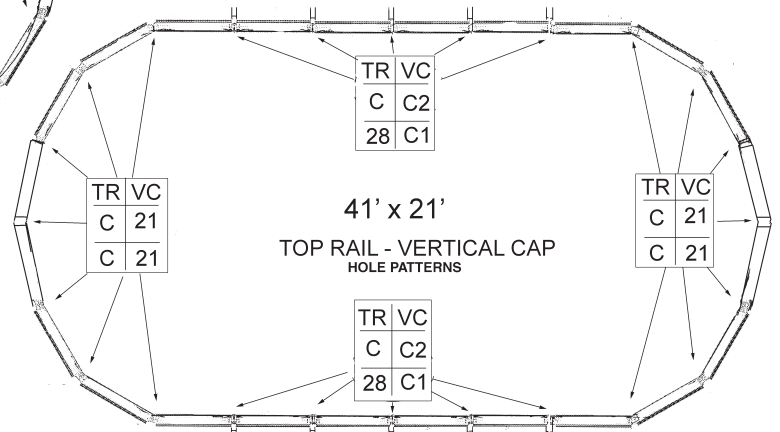
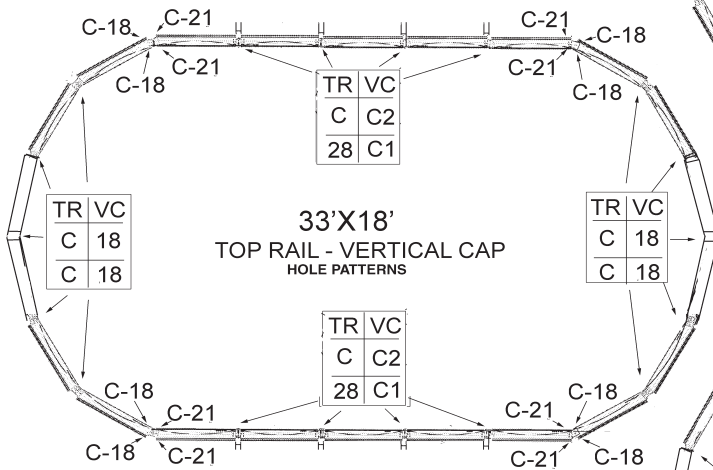
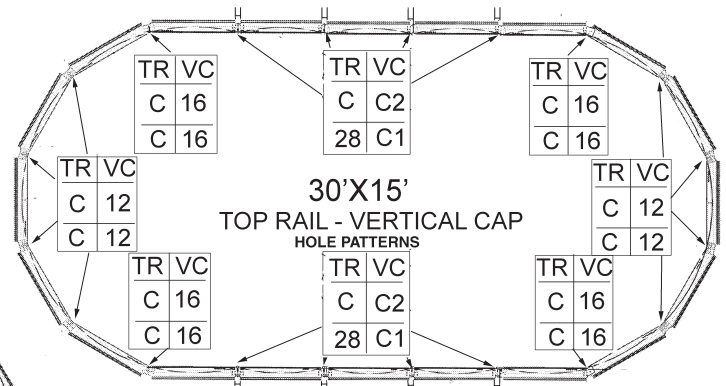
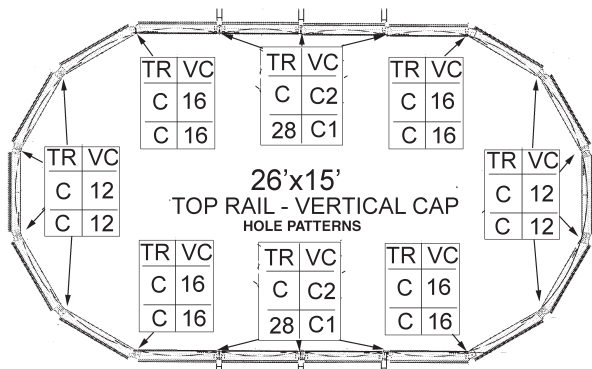
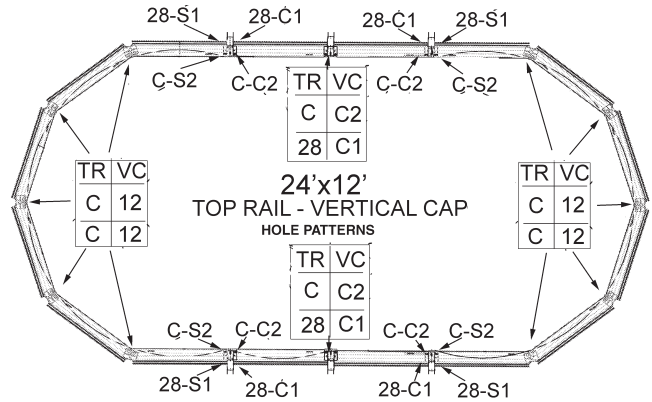
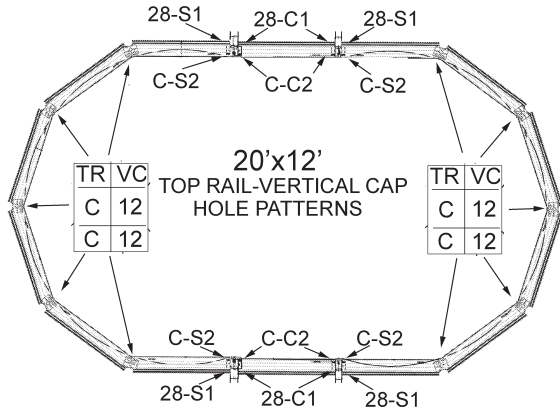
**Side view**  
**Fig. B**



**EXTENSION SHOWN IS FOR 54" POOLS ONLY. REFER TO YOUR POOLS PARTS LIST FOR CORRECT EXPLODED VIEW AND PARTS LOCATIONS.**

**Step 15... Top Rail Joints**

**USE THE DIAGRAMS BELOW FOR POOL SIZES SHOWN.  
REFER TO THE NEXT PAGE FOR 16' WIDE OVALS AND 34'x18' POOLS**



PLEASE REFER TO DIAGRAMS AT THE BOTTOM OF THE NEXT PAGE FOR RESIN TOP RAIL HOLE IDENTIFICATION.

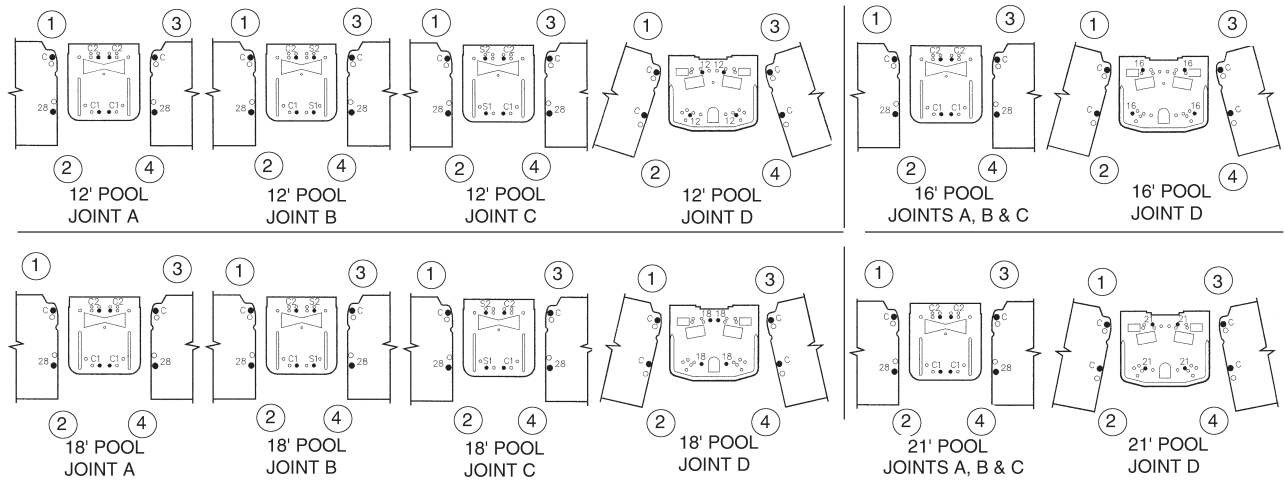
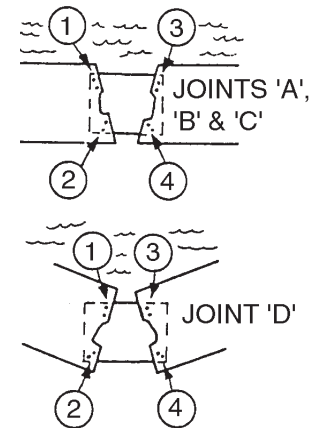
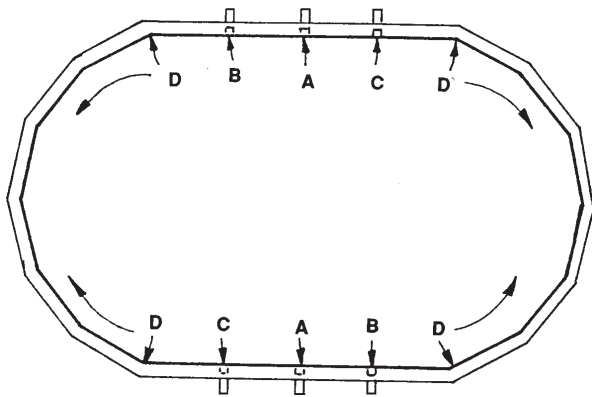
**Step 16...  
INSTALL TOP RAILS**

There are several different joints where top rails meet as shown. Refer to diagram for your pool size for attachment and proper placement. Use four #10x1/2" screws to attach the top rails to the vertical end caps.

**INSTALL TOP RAILS - continued**

**USE THE DIAGRAM AND CHART BELOW ON THIS PAGE FOR 24'x16', 28'x16' and 32'x16' POOLS AND 34' X 18' POOLS.**

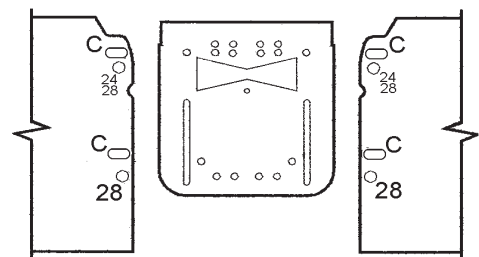
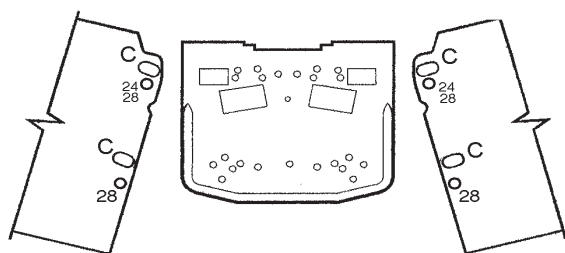
**Top Rail Joints**



<b>HOLE CHART FOR 7" &amp; 9" TOP RAIL POOLS</b>																
12', 16', 18' & 21' POOL WIDTHS	JOINT A				JOINT B				JOINT C				JOINT D			
	12'	16'	18'	21'	12'	16'	18'	21'	12'	16'	18'	21'	12'	16'	18'	21'
Hole 1 - Top Rail	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Hole 1 - End Cap	C/2	C/2	C/2	C/2	C/2	C/2	C/2	C/2	S/2	C/2	S/2	C/2	12	16	18	21
Hole 2 - Top Rail	28	28	28	28	28	28	28	28	28	28	28	28	C	C	C	C
Hole 2 - End Cap	C/1	C/1	C/1	C/1	C/1	C/1	C/1	C/1	S/1	C/1	S/1	C/1	12	16	18	21
Hole 3 - Top Rail	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Hole 3 - End Cap	C/2	C/2	C/2	C/2	S/2	C/2	S/2	C/2	C/2	C/2	C/2	C/2	12	16	18	21
Hole 4 - Top Rail	28	28	28	28	28	28	28	28	28	28	28	28	C	C	C	C
Hole 4 - End Cap	C/1	C/1	C/1	C/1	S/1	C/1	S/1	C/1	C/1	C/1	C/1	C/1	12	16	18	21

**REFER TO THE DIAGRAMS BELOW FOR TOP RAIL HOLE NUMBERS AND LETTERS FOR RESIN TOP RAILS.**

**STEEL TOP RAILS ARE STAMPED WITH THE PROPER HOLE IDENTIFICATION.**





## Step 17...

### ATTACH TOP CONNECTORS

Attach top connectors to pool. Refer to your pools exploded view for proper installation for Top connector and skirt if applicable. Secure with screws as shown in detail in your parts list.

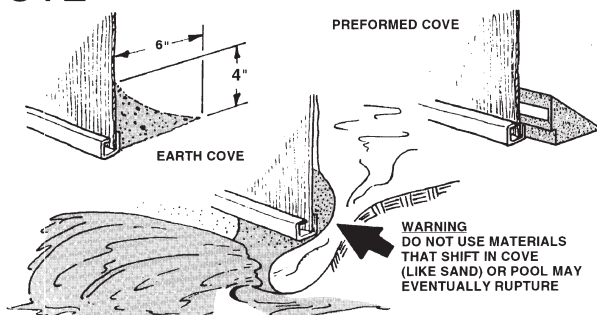
## Step 18...

### CHECK WALL RADIUS

**Important Step:** At this time, fill in all excavations on outside of pool. Cover inside pressure pads and horizontal beams with approximately 3" of damp sifted earth; tamp and blend to bottom of pool. Check pool framework to assure level installation. Place the level on each top rail, working gradually around pool, to assure framework is on flat ground with opposite sides no more than 1 inch out of level. **Remember: Always remove dirt to adjust framework - never fill in!** Use level to check straightness of verticals. Using Stake A as center point, measure from stake to pool wall to assure roundness of ends. Measure to left wall, right wall, and to each connector at pool end. Distance should be equal at all points. Follow same procedure using Stake B as center point for opposite end.

## Step 19...

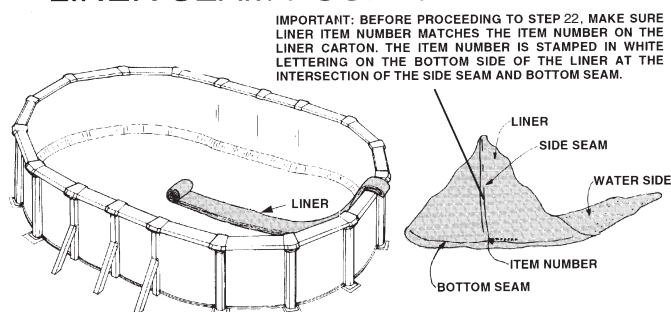
### COVE



**Important Step:** The cove is a vital structural element that prevents water pressure from forcing the pool liner out under the bottom rail. The manufacturer will not assume responsibility should the cove be omitted. **EARTH COVE:** Use screened damp earth to form a cove around the inside base of pool wall. Shape and compact firmly. **PRE-FORMED:** Specifically designed pre-formed pool cove is available from your dealer. Follow cove manufacturer's instructions. **Recheck pool for roundness after installing cove.**

## Step 20...

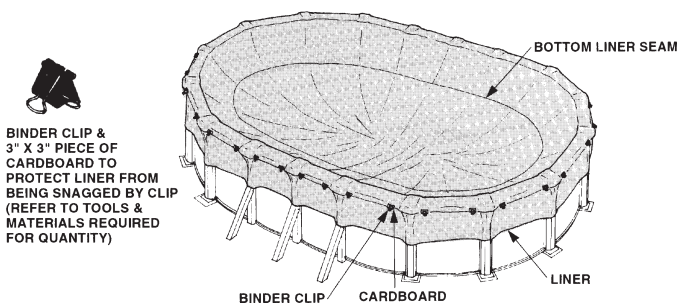
### LINER SEAM POSITIONING



Remove all Stakes. Check the pool floor (area inside pool wall) for levelness. Fill in all slight depressions with sifted earth and tamp. Remove all stones and sharp objects. Fill in all footprints on pool floor. Place liner on top of top rail. The loose end should overhang outside of pool by about 12 inches. Hold end and unfold liner down middle of pool as you would a carpet. Do not place liner side seam over skimmer or return fitting opening. The center seam of the liner must be positioned at the center line of the pool.

## Step 21...

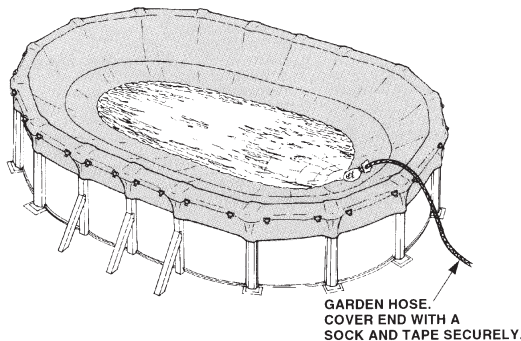
### INSTALL LINER



Work in both directions from the point where the liner is overhanging. Unfold liner, drape over the top rail and down the sides approximately 24 inches. The liner should be barely above the pool floor in the center ONLY. Remember that the center seam of the liner must be positioned at the center line of the pool. The bottom edge seam of the liner should be inside the pool about 12 inches from the top rails. Correct bunching or pleating conditions in the liner wall. Inspect liner for open seams. If found, return to dealer for prompt replacement of liner.

### Step 22...

## FILL POOL



With the liner in position, hold in place by attaching two binder clips over folded cardboard on the underside of each top rail. Carefully cover the end of a garden hose with a sock and tape securely as shown, place it in the pool and begin to fill. As pool fills, the liner will stretch as the water begins to cover the bottom. At this time, check the sidewall for extreme tautness. Binder clips do not self-release. Any area that feels tight should be relieved by releasing the binder clips and allowing the liner to feed back into the pool until the desired tautness is achieved.

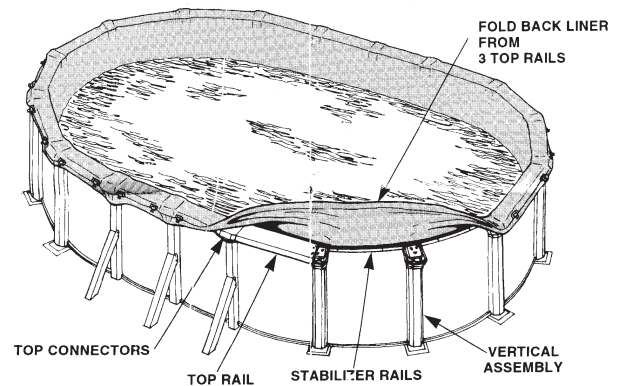
### Step 23...

## CONTINUE FILLING POOL

Adjust liner evenly, all the way around the pool. When properly installed the bottom seam will be approximately midway up the cove. Continue filling until water is 24" up the wall then stop filling. **Never allow liner to fall back into pool.** Do not resume filling until Steps 24, 25 and 26 are completed. **CAUTION:** Do not cut any openings into liner at this time.

### Step 24...

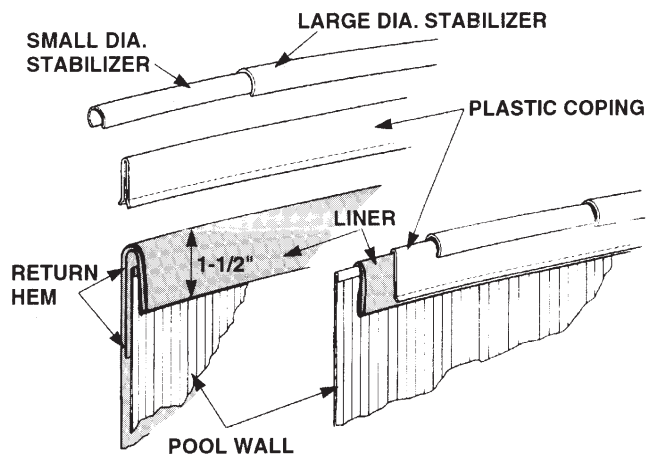
## PROCEDURE TO ATTACH LINER



With the help of two or three people, raise and hold the liner up from any three top rail sections. Remove four top connectors, three top rails and two vertical end caps. **REMEMBER, NEVER ALLOW LINER TO FALL BACK INTO POOL.**

### Step 25...

## INSTALL COPING AND STABILIZER RAILS



Make a return hem as illustrated. **DO NOT** cut off excess liner material as the liner will "slip" from under the plastic coping, causing liner to fall back into the pool. Smooth liner against wall and secure to top of wall with plastic coping. Place stabilizer rails over coping, alternately telescoping small diameter into large diameter about 6 inches as before. One large diameter stabilizer rail fits between each pair of side supports. They **DO NOT** telescope.



NOTE: At the skimmer and return openings only, the return hem must be cut away between the steel side wall and the liner side wall. (This will insure that there is only one thickness of liner material covering the skimmer and return openings to affect a positive gasket seal). DO NOT CUT the liner sidewall at any other location. Replace all parts removed in Step 25. Repeat same steps for entire pool perimeter, working just three top rail sections at a time. DO NOT allow liner to fall back into pool.

**IMPORTANT:** Above-ground pools are designed for swimming and wading only. Diving or Jumping is product of mis-use. DO NOT DIVE OR JUMP! Use only an above-ground swimming pool ladder to enter or exit your pool. Do not use slides, diving boards, or any other platform or object which can be used for improper pool entry! **It is your responsibility to secure your pool against unauthorized, unsupervised, or unintentional entry. Remember, pool mis-use can result in severe injury and/or other dangers to life and health.** Always obey and enforce all safety rules.

### Step 26...

With pool completely assembled, install skimmer, filter, etc. using instructions provided with units. Consult with your dealer for the proper chemicals and water treatment recommended.

### Cleaning

Pool parts are easily cleaned with a mild liquid soap and a soft cloth. Do not use abrasive cleaning pads, or cleaners containing abrasives as they may scratch or dull the surface appearance.

### SAFETY LITERATURE

Now that you have installed your new pool, you can look forward to many years of fun and enjoyment. However, your pool is also a big responsibility. For this reason, we have provided you with an assortment of safety literature. **Please take the time to read and understand all the safety literature provided.**

You have also been given an assortment of signs and decals. Refer to your "Safety First" booklet for detailed instructions of where and how to apply them. Remember, warnings only help if you put them up. Please help us protect the good health and safety of your family and friends! Read the "Safety First" booklet through completely and follow the directions in it.

If any of your safety literature, signs, or decals become lost or damaged, you can get more free by contacting HII Customer Service Department:  
HII  
315 N. Sebastian Street  
West Helena, AR 72390  
(870) 572-3466



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