

Welcome to the PMG Educational Program

Sponsored by:



www.iccsafe.org/conference
#ICCAC18

Today's Presenter



“Layers of Protection 2018 ISPSC”

Carvin DiGiovanni

Vice President, Technical and Standards
Association of Pool & Spa Professionals

Goal

- The goal of this presentation is to highlight the 2018 *International Swimming Pool & Spa Code*® (ISPSC).



Chapters:

- 1 Scope and Administration
- 2 Definitions
- 3 General Compliance
- 4 Public Swimming Pools
- 5 Public Spas & public Exercise Spas
- 6 Aquatic Recreation Facilities

Code Book Layout



- 7 Onground Storable Residential Swimming Pools
- 8 Permanent Inground Residential Swimming Pools
- 9 Permanent Residential Spas & Exercise Spas
- 10 Portable Residential Hot Tubs & Exercise Spas
- 11 Reference Standards

General Concepts and History of the ISPSC

Who is Virginia Graeme Baker?

- The Virginia Graeme Baker Pool & Spa Safety Act (P&SS Act) takes its name from Virginia Graeme Baker, a young girl who drowned after she was trapped under water by the powerful suction from a hot tub drain.



History of VGB

- Signed by the President on December 19, 2007
- Is the product of the concerted efforts of many people, including:
 - **Nancy Baker**, mother of Virginia Graeme Baker
 - **Senator Amy Klobuchar** of Minnesota, who put in the public pool drain cover retro-fit mandate as a result of the tragic evisceration of **Abigail Taylor** in a public wading pool in Minnesota summer of 2007.
 - **Congresswoman Debbie Wasserman Schultz** of Florida, a pool safety advocate since her time in the FL Legislature.

- Effective December 19, 2008, the Section 1404 of the Act required:
 - All drain covers manufactured or sold in the United States had to conform to the ANSI/APSP-16 2011 *Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, and Hot Tubs.*

Basic Requirements

All public pools and spas with a single main must have **a compliant cover** and

- a safety vacuum release system (SVRS);
- suction limiting vent system;
- gravity drainage system;
- automatic pump shutoff system; or
- disable the drain

CPSC Enforcement Agency



Key Definitions



Aquatic Recreation Facility (Water Park)

- A facility that is designed for free-form aquatic play and recreation. The facilities may include, wave or surf action pools, leisure rivers, sand bottom pools, vortex pools, activity pools, inner tube rides and body slides, and interactive play attractions.

Aquatic Recreation Facility

Courtesy of Tolomato Community Development District



Class D-1, Wave Action



International Code Council®

Courtesy of Jon Barnes Photography

Class D-2, Activity Pool



A pool designed for casual water play ranging from simple splashing activity to the use of attractions placed in the pool for recreation.

Class D-3, Catch Pool

Courtesy of Tolomato Community Development District



Class D- 4, Leisure River



Courtesy of Tolomato Community Development

Class D-5, Vortex Pool



Class D-6, Interactive Play Attraction



Courtesy of the City of La Mirada, CA

- A pool, other than a residential pool, that is intended to be used for swimming or bathing...
- Public pools shall be classified and defined in the following slides:

Class A, Competition



International Code Council®

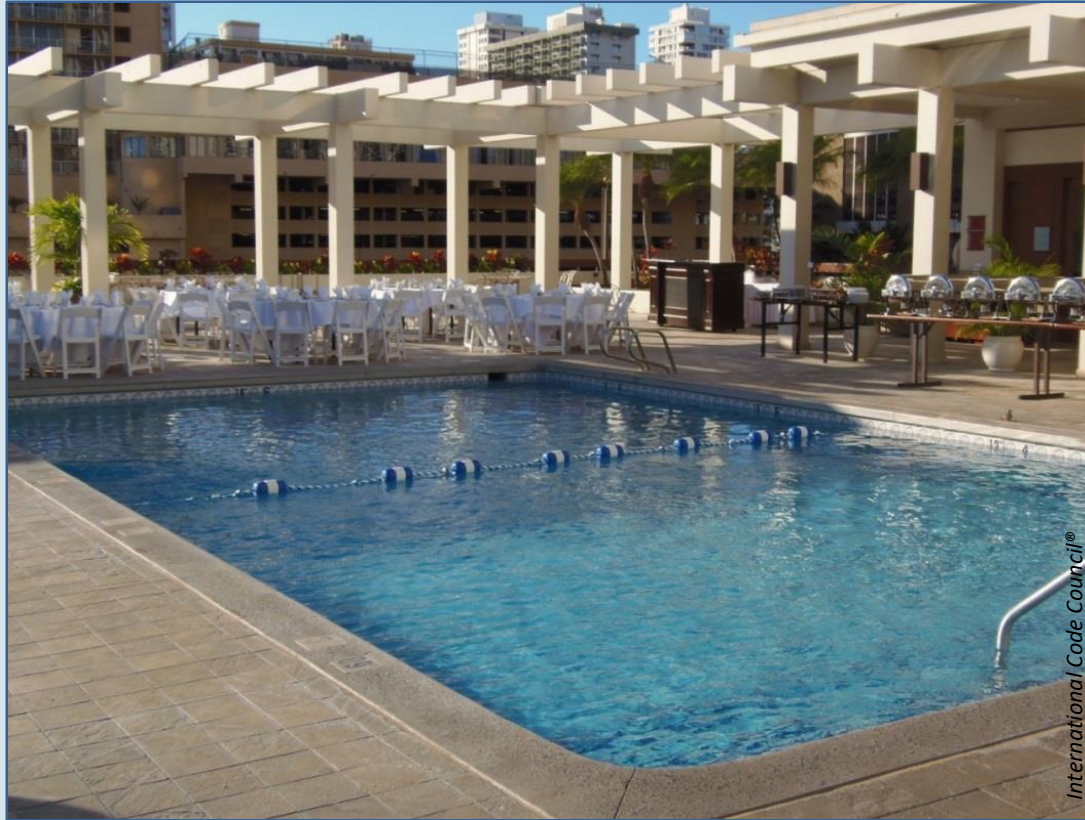
Class B, Public



Courtesy of the City of La Mirada, CA

Intended for public recreational use

Class C, Semi-public



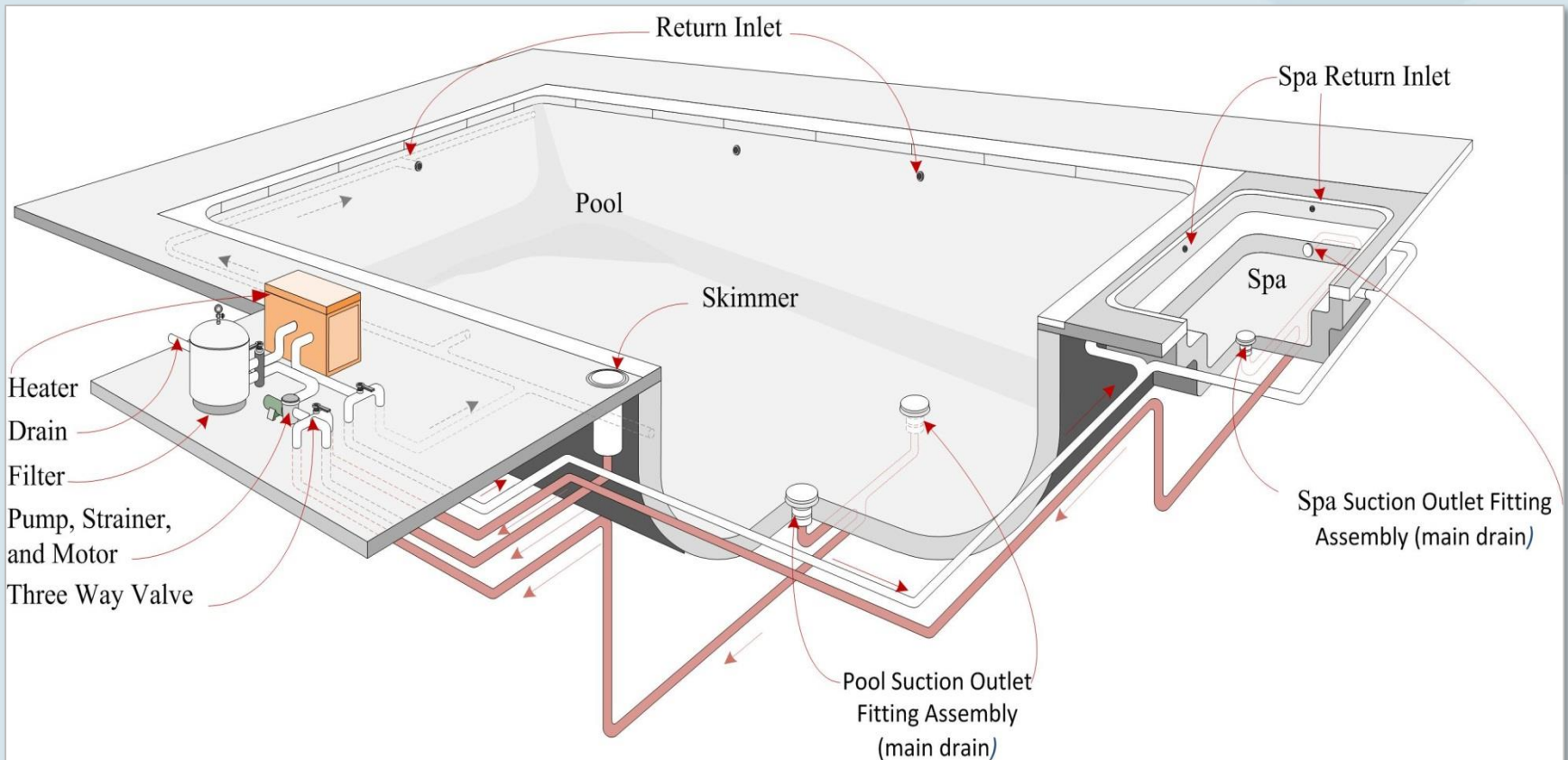
A pool operated solely for and in conjunction with lodging - hotels, motels, apartments, condominiums, etc.

- **CLASS E.** Pools used for instruction, play or therapy and with temperatures above 86°F (30°C).
- **TYPES VI-IX.** Public pools suitable for the installation of diving equipment by type.
- **TYPE O.** A nondiving public pool.

General



Section Design 311.2



International Code Council®

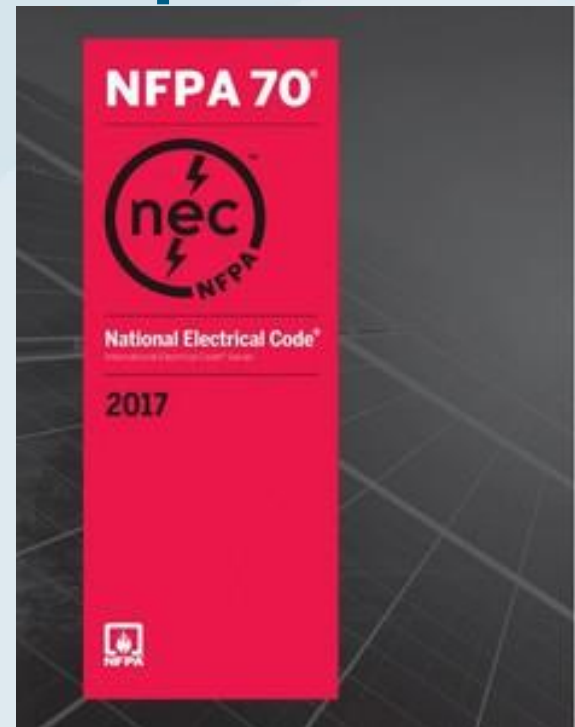
Electrical, Plumbing, Mechanical, & Fuel Gas Requirements



Section 302.1 Electrical

Electrical Requirements for Aquatic Facilities

NFPA 70 National Electric Code



Section 302.2 Water Service and Drainage



Piping and fittings used for water service...
shall be approved for installation with the
piping installed.

Section 302.3 Pipe, fittings and components.

- Pipe, fittings and components shall be listed and labeled in accordance with NSF 50 or NSF 14.

Exception: Portable residential hot tubs and exercise spas listed and labeled in accordance with UL 1563 or CSA C22.2 No. 218.1.

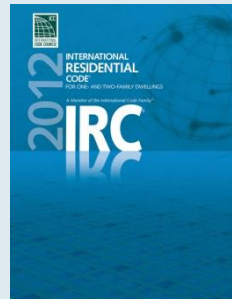
Section 302.4 Concealed Piping Inspection

- Piping, including process piping, that is installed in trenches, **shall be inspected** prior to backfilling



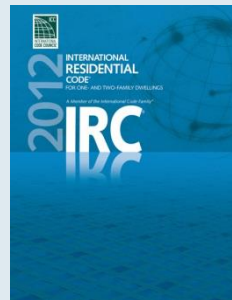
Section 302.5 Backflow Protection

- Water supplies for Pool and spa shall be protected against backflow in accordance with the *International Plumbing Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1



Section 302.6 Waste Water Discharge.

- Wastewater treatment ...shall be in accordance with the *International Plumbing Code* or the *International Residential Code*, as applicable in accordance with Section 102.7.1.



Section 302.7 Test

- Tests on piping systems constructed of plastic piping **shall not** use compressed air for the test.



Section 302.8.1 Manuals

- An operating and maintenance manual shall be provided for each piece of equipment requiring maintenance.



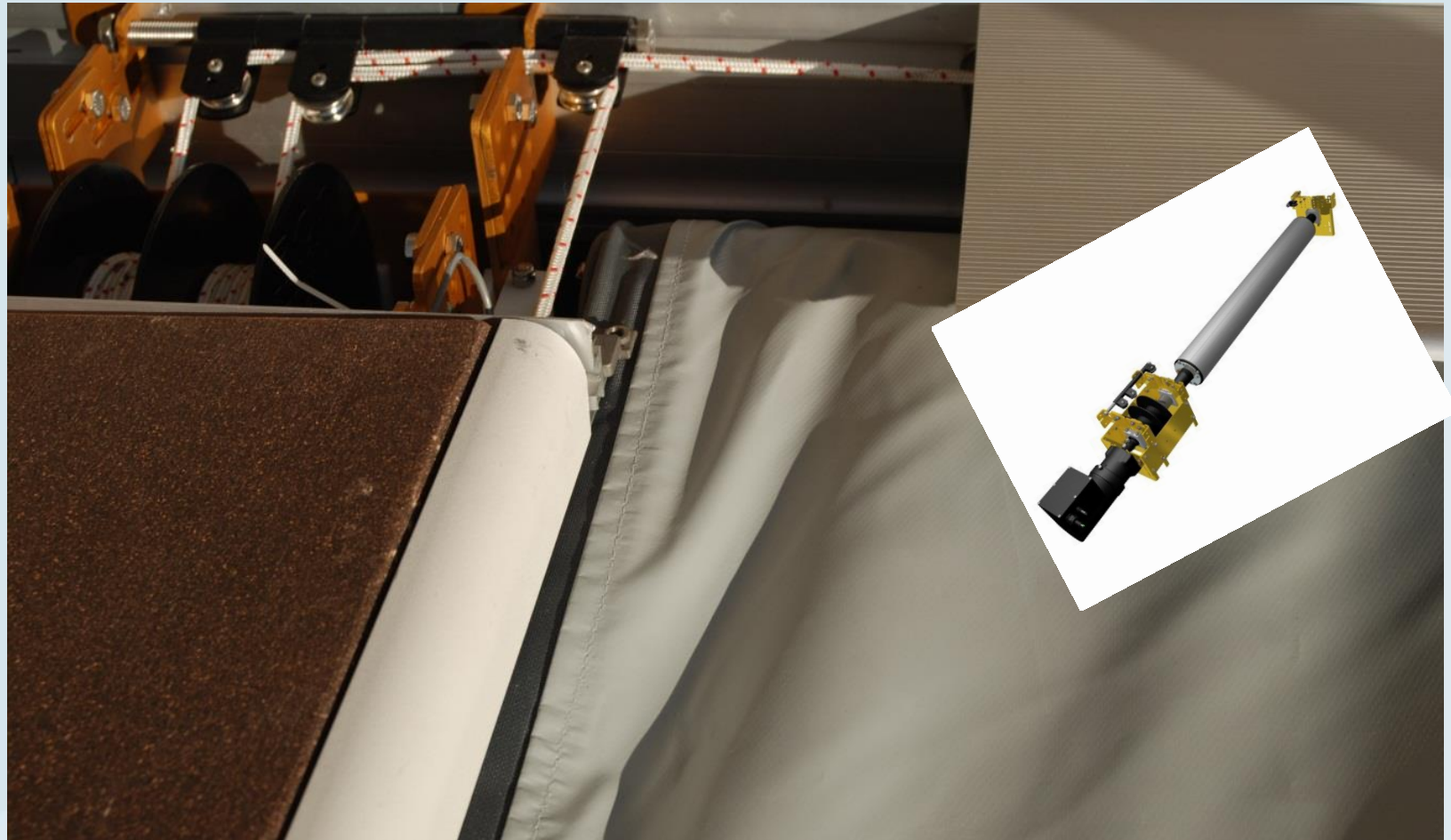
Barrier Requirements



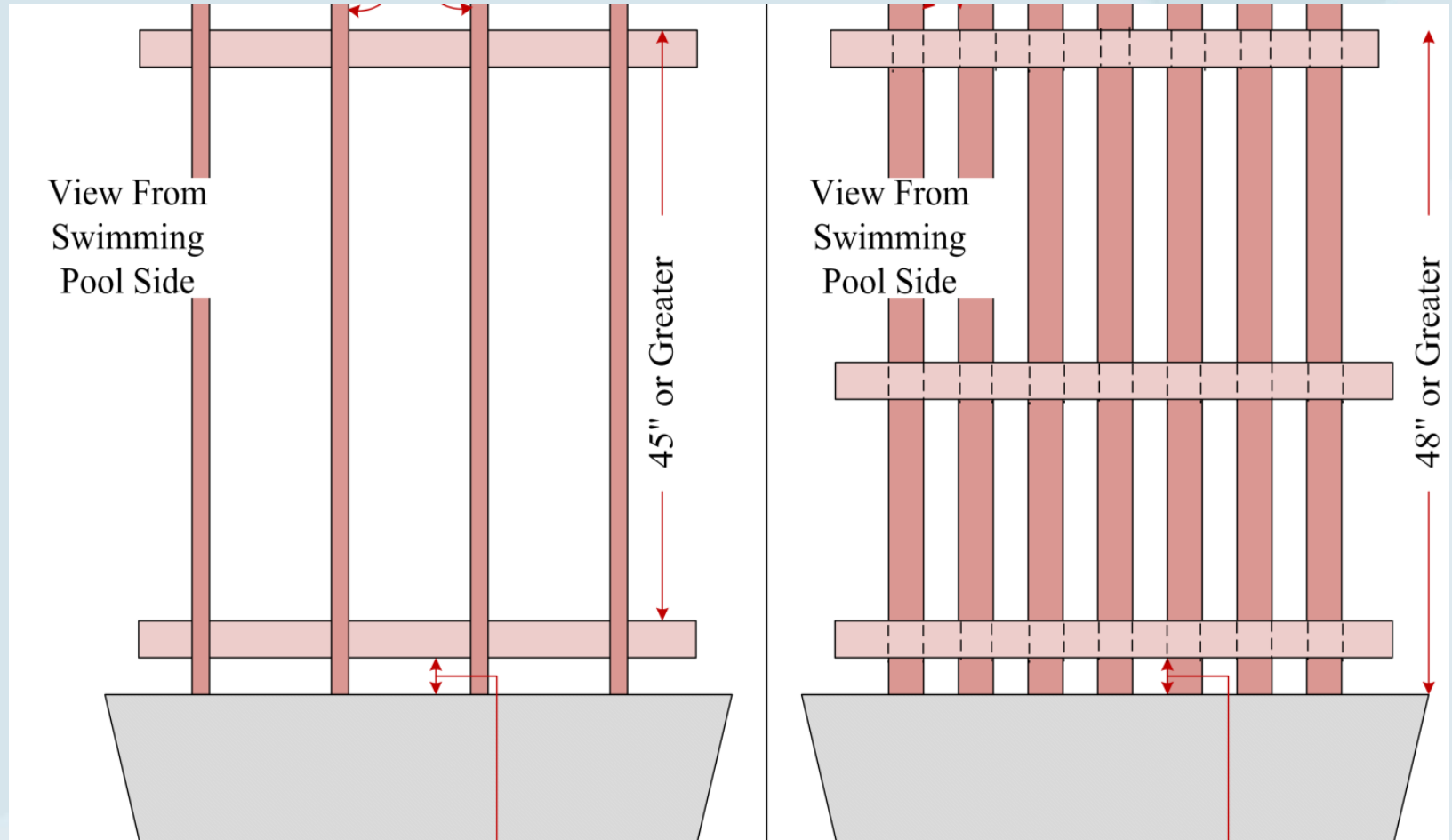
Section 305 Barrier Requirements

- Barriers for pool and spas
- **Exceptions** inground spas and hot tubs with a lockable safety cover and pools with a powered safety cover (ASTM F 1346) **do not require a barrier.**

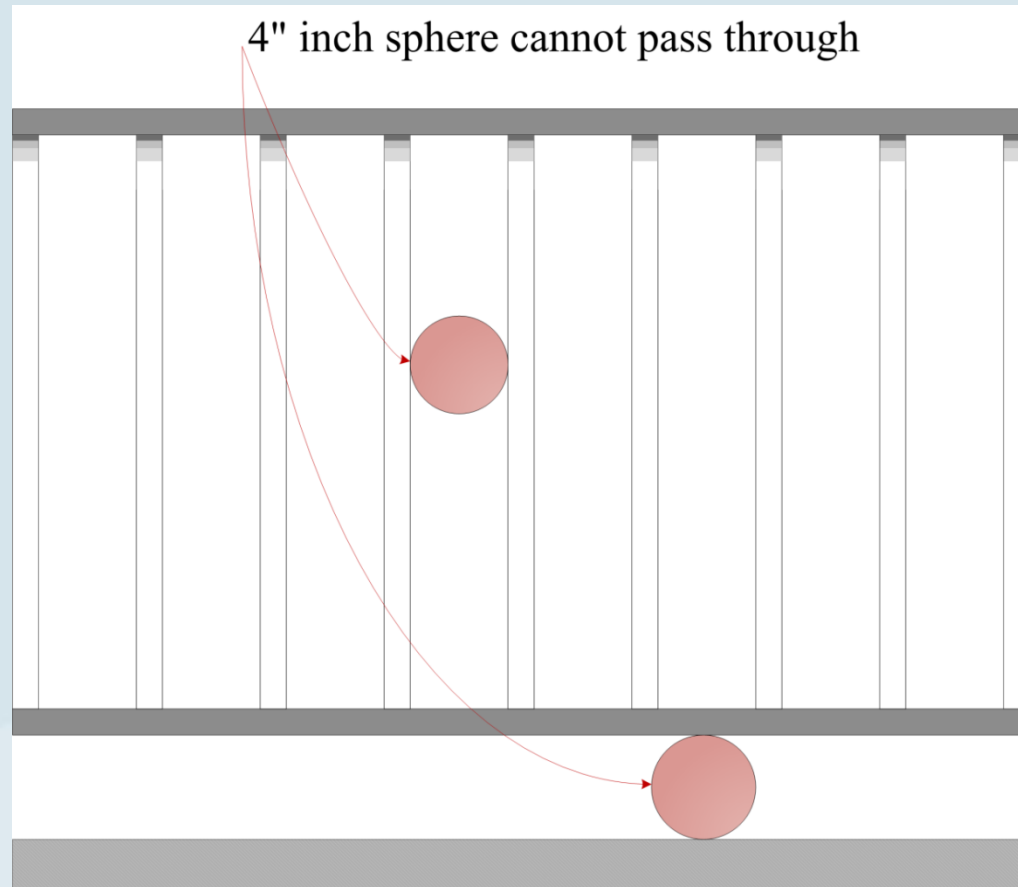
Powered Safety Cover (ASTM F 1346)



Section 305.2.1 Barrier height and clearance



Section 305.2.2 Openings



Section 305.2.4 Mesh Barrier

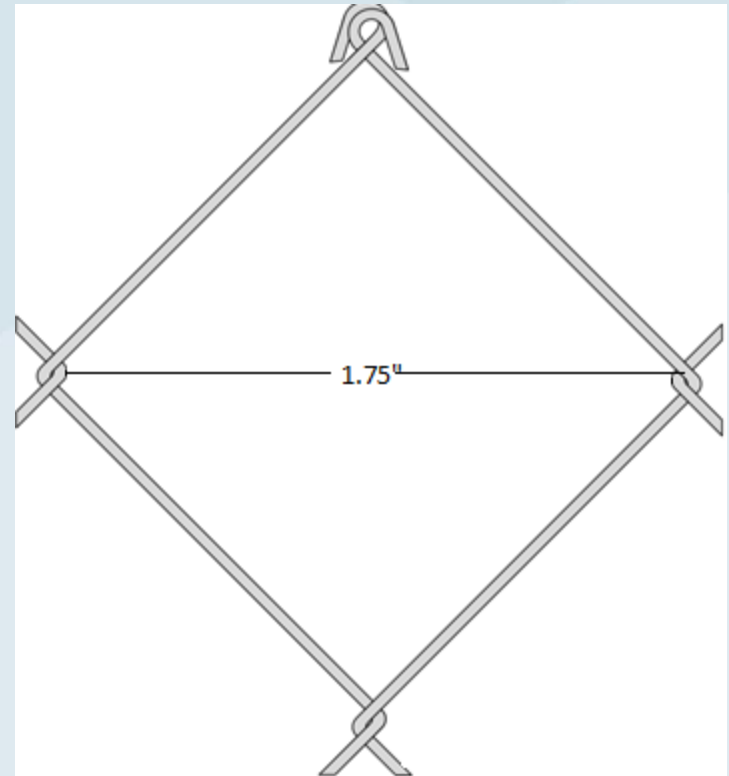
- No more than 1" above the deck
- Fence lift no more than 4" from grade or decking
- Panel attachment device no lower than 45" above grade
- Not allowed on top of aboveground pools



Courtesy of Association of Pool & Spa Professionals™

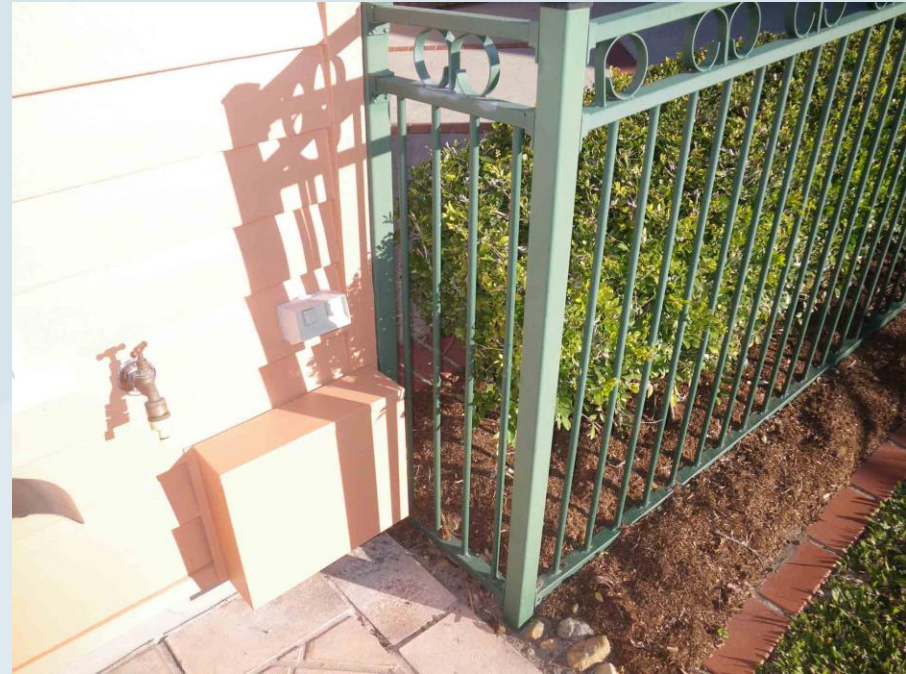
Section 305.2.7 Chain Link Dimensions.

- The maximum opening formed by a chain link fence shall be not more than 1.75 inches (44 mm).

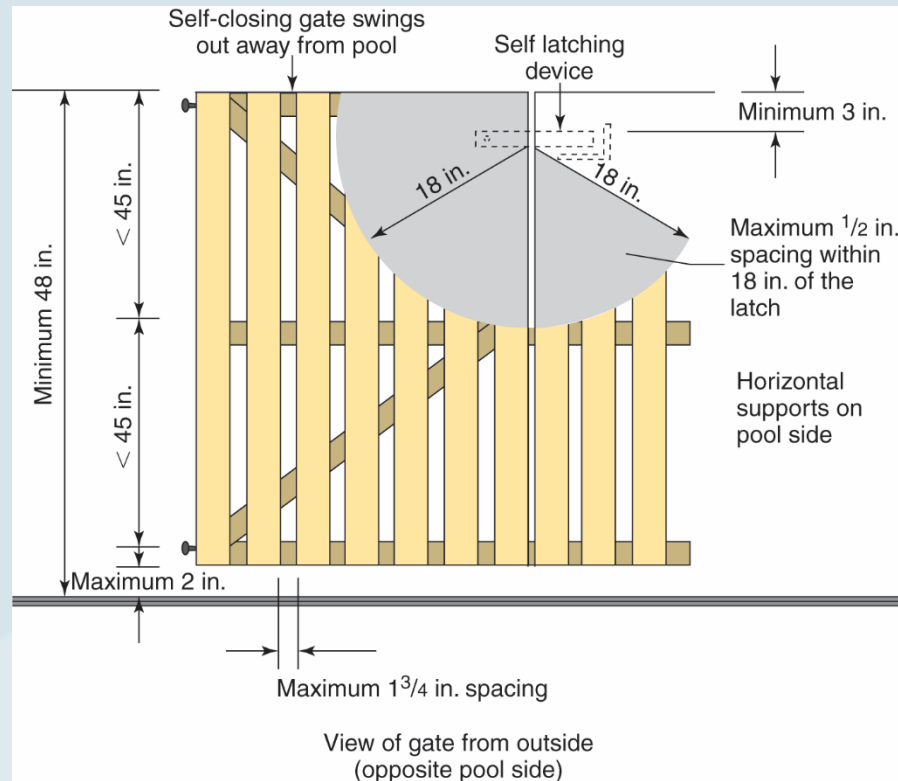


305.2.9 Clear zone

- There shall be a clear zone of not less than 36 inches (914mm) between the exterior of the barrier and any permanent structures or equipment such as pumps. Filters and heaters that can be used to climb the barrier.



Section 305.3 Gates



International Code Council®

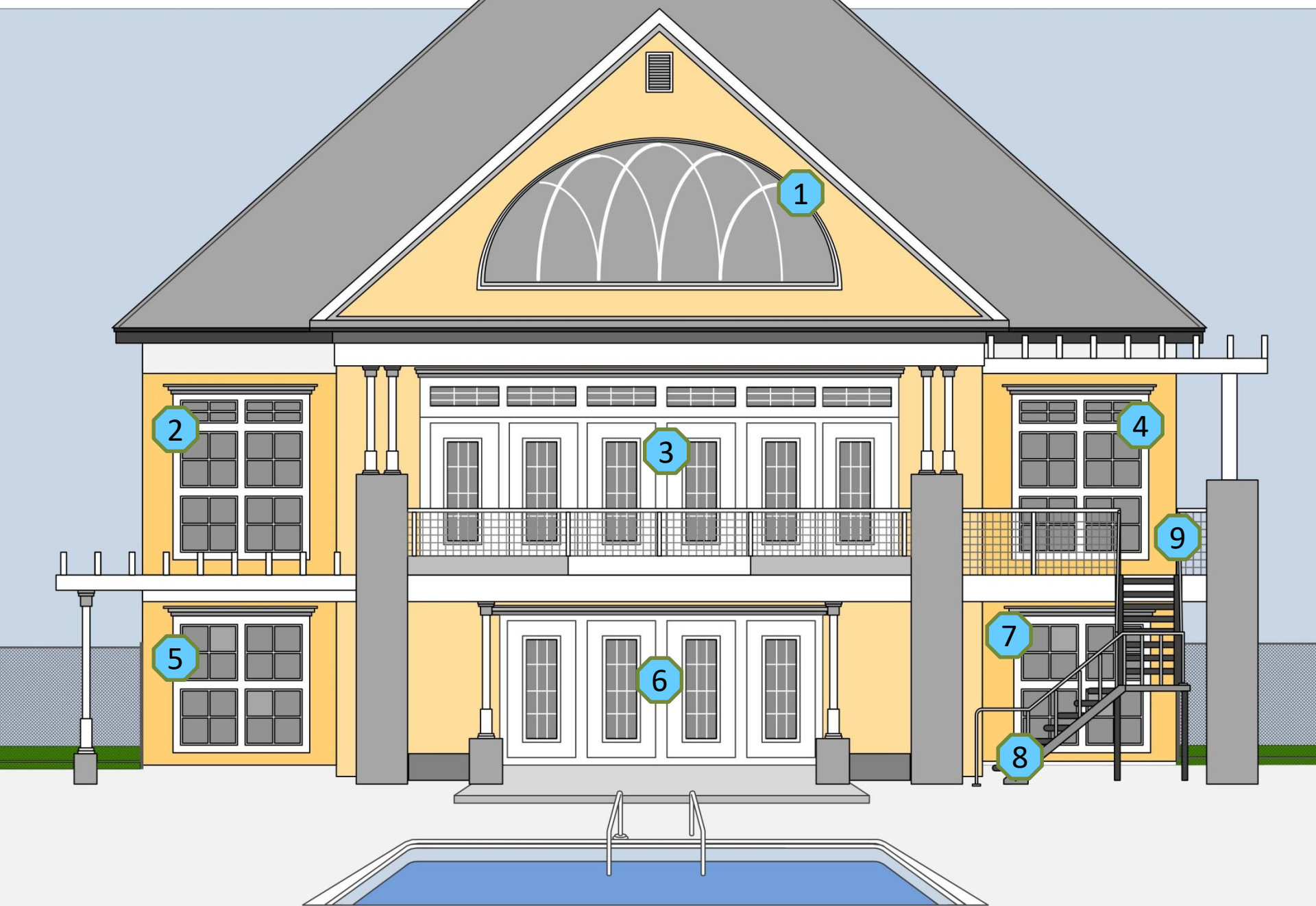
Example of Self Latching Gate



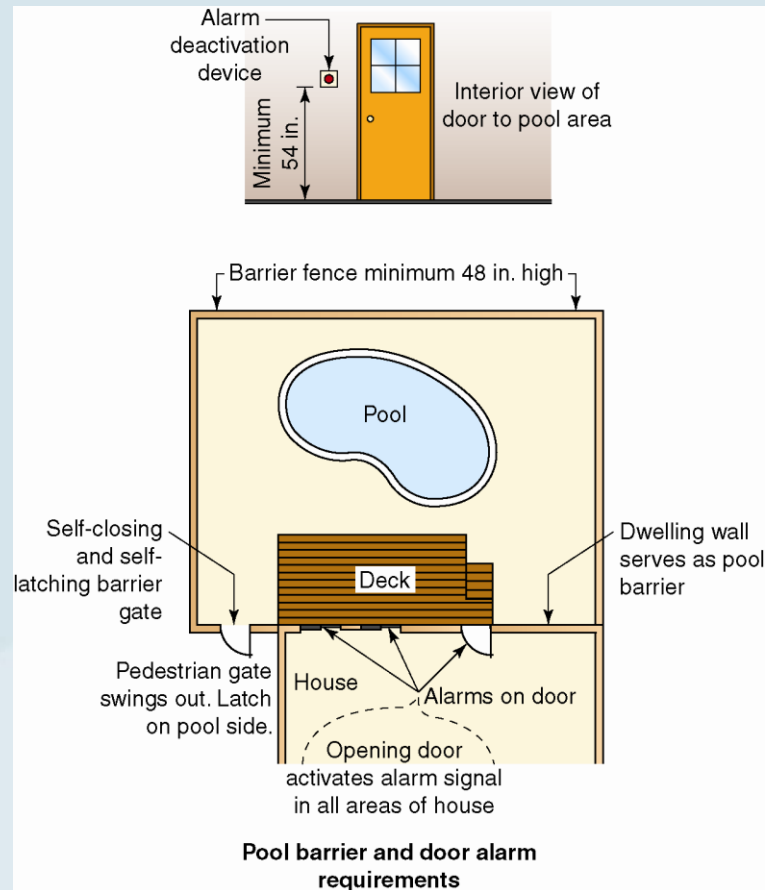
Courtesy of Association of Pool & Spa Professionals™

305.4 Structure Wall as a Barrier





305.4 Structure Wall as a Barrier

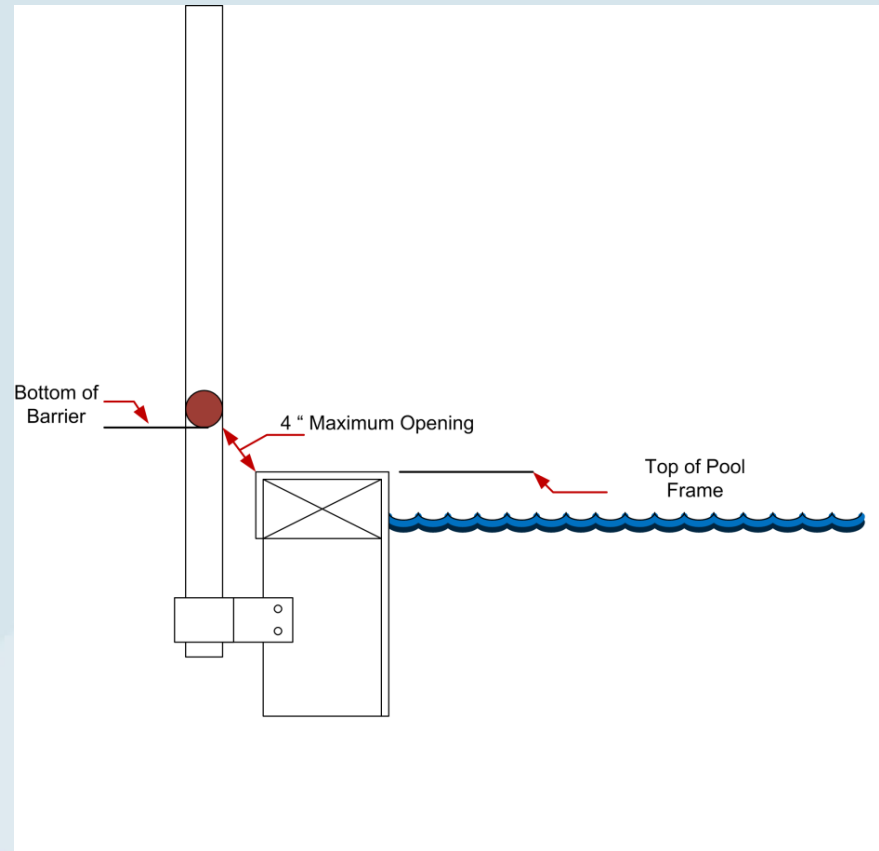


Section 305.4 Structure Wall as a Barrier.

- Doors and operable windows with a sill height less than 48 inches (1219 mm) that provide direct access to the pool through the wall, shall be equipped with an alarm.
 - The alarm shall be listed and labeled in accordance with UL 2017.

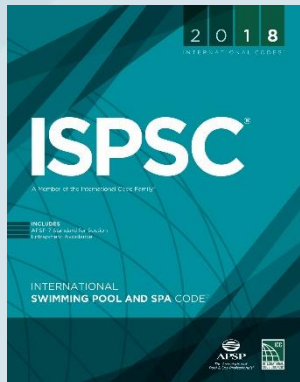
Section 305.5

Pool Structure as a Barrier- Aboveground Pool



Section 310

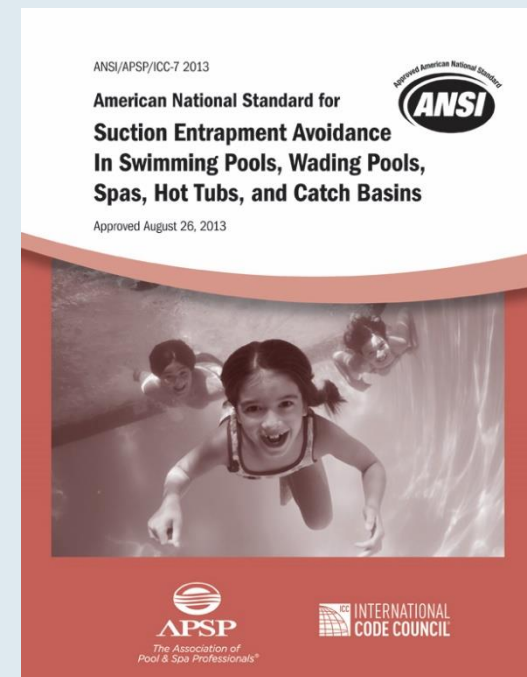
Suction Entrapment Avoidance



Section 310.1 General

Suction Entrapment avoidance for Pool and spa shall be in accordance with ANSI/APSP/ICC-7.

- **Exception:** Portable residential hot tubs and exercise spas listed and labeled in accordance with UL 1563 or CSA C22.2 No.218.1



Safety Awareness

*There is **no backup** for a missing or damaged suction outlet cover/grate. If any cover/grate is found to be damaged or missing, the pool or spa shall be immediately closed to bathers.*

Limb entrapments have occurred when no water was flowing through the pipe – the opening was exposed.

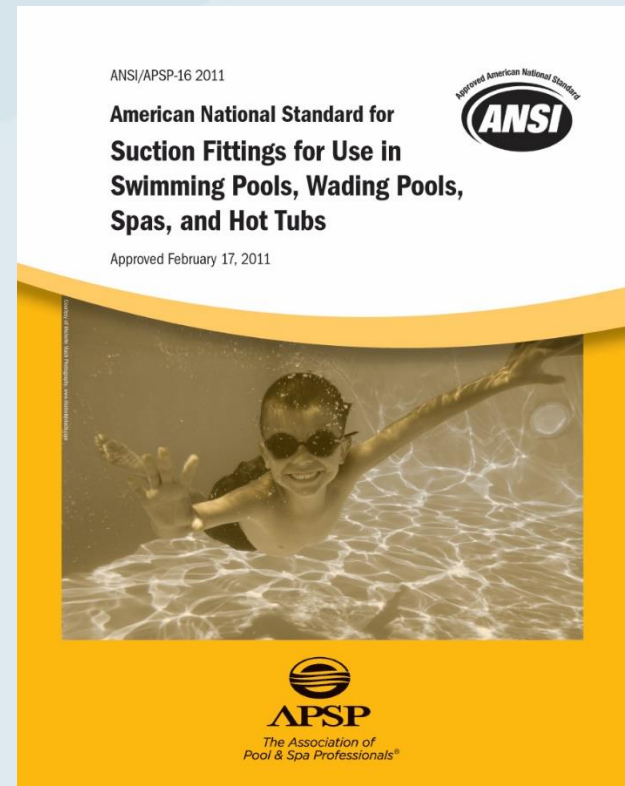
General Requirements

- Section Outlets are optional- No Main drain
- Suction outlets are certified to ANSI/APSP-16
- Secondary system for single drains
- Multiple outlet spacing

Listed VGB Safety Covers

Suction Outlet Fitting Assemblies (SOFAs)

SOFAs (Drain Covers) shall
be in compliance with
ANSI/APSP-16 2011.



Covers may be verified with Plans and/or Inspection

- Permit application can include the Manufacturer, make and model of the drain covers, including the flow rating.
- Covers must have the following language embossed on them or permanently marked in an location that is visible when installed.

***ANSI/APSP-16 2011 and, a flow rating “X GPM”, and
“Life: X Years”, and Manufacturer and Model***

Minimum flow ratings

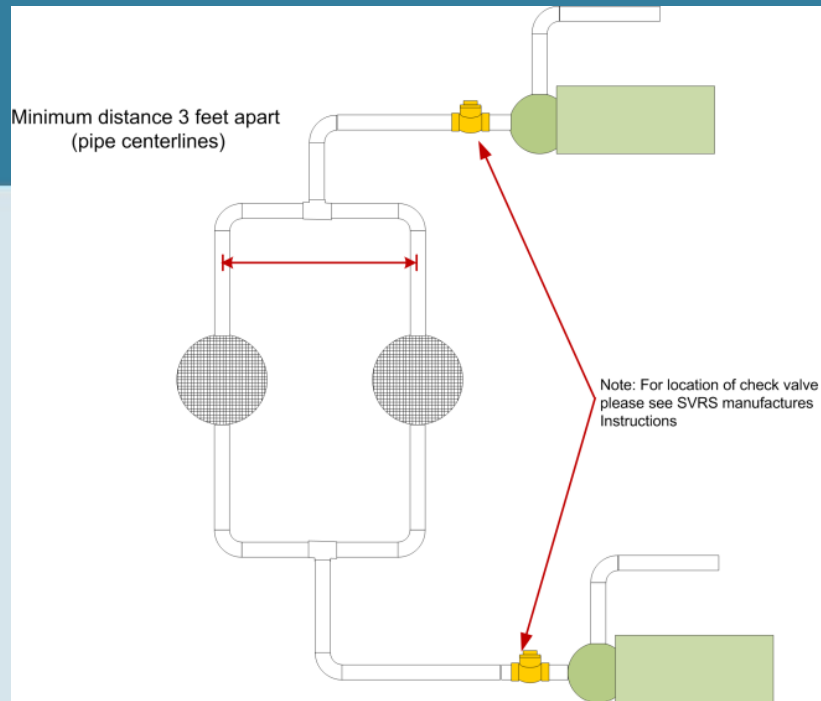
When used, submerged SOFAs shall be single unblockable, dual, or three-or-more.

- **Single or dual outlets.** The flow rating for **each** cover/grate shall be greater than the maximum system flow rate.
- **Three or more outlets.** the sum of the flow ratings shall be at least **twice the maximum** system flow rate.

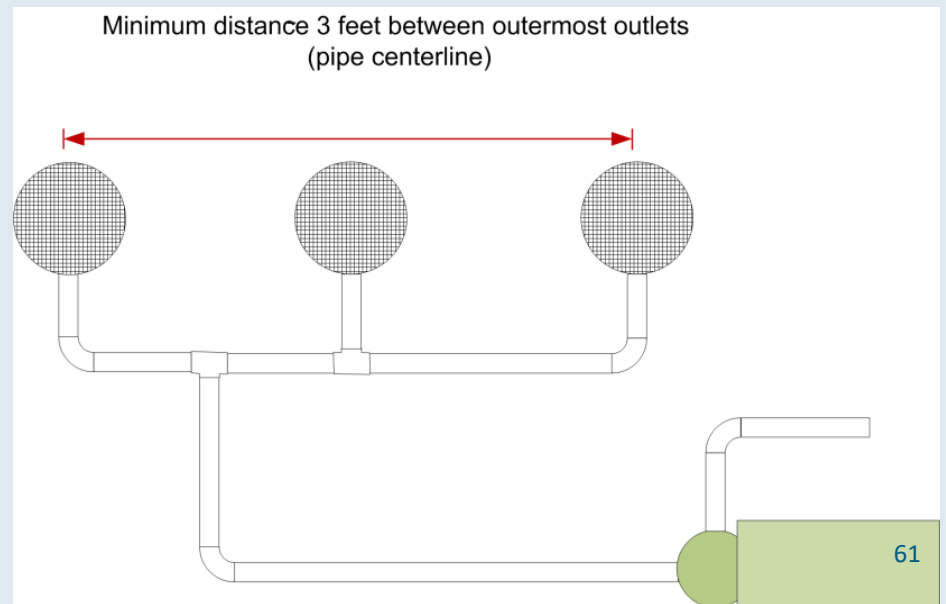
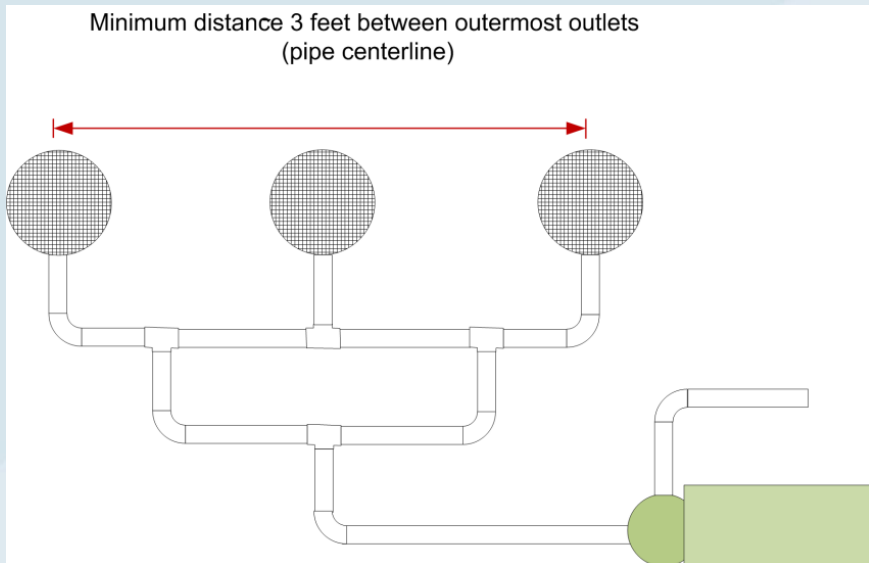
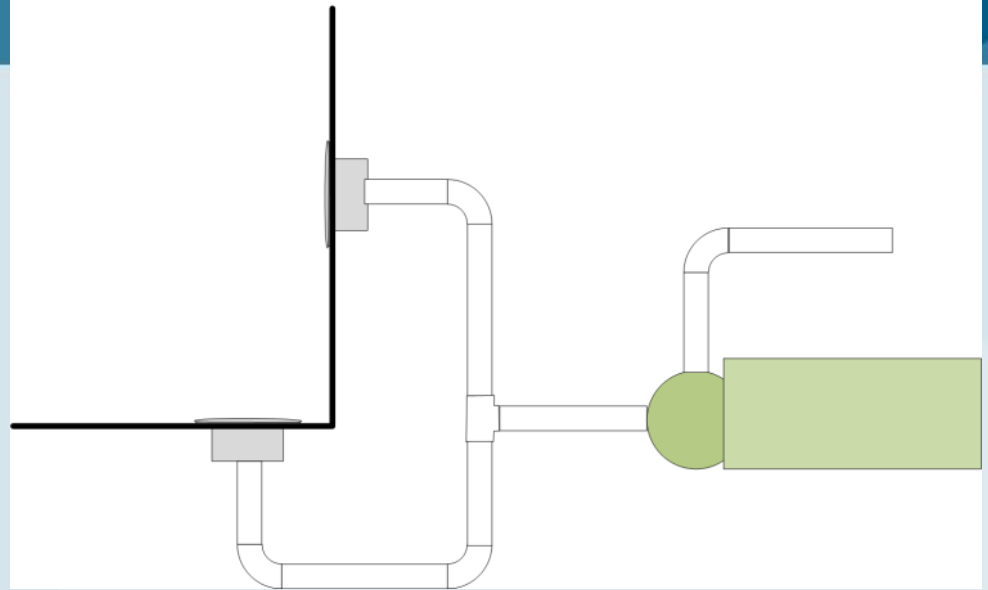
Drain (SOFA) Placement

Two covers/grates shall be separated by a minimum of **3 feet measured from center to center** of suction pipes,

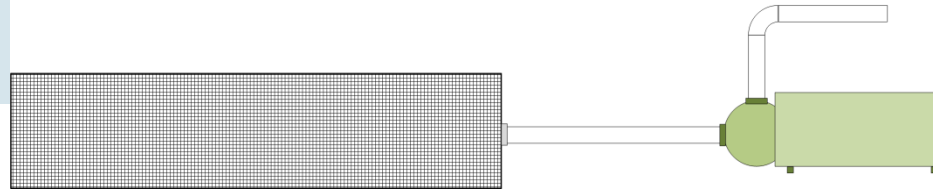
or located on two (2) different planes.



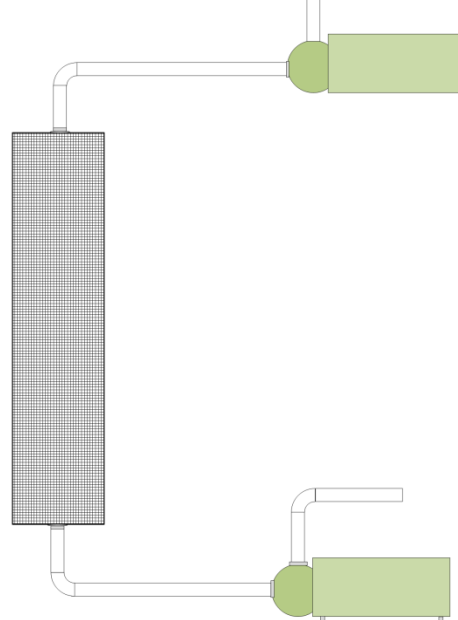
Dual Outlets on Different Planes (Elevation or Plan View)



Channel Drain (min. 3" x 31" open area)

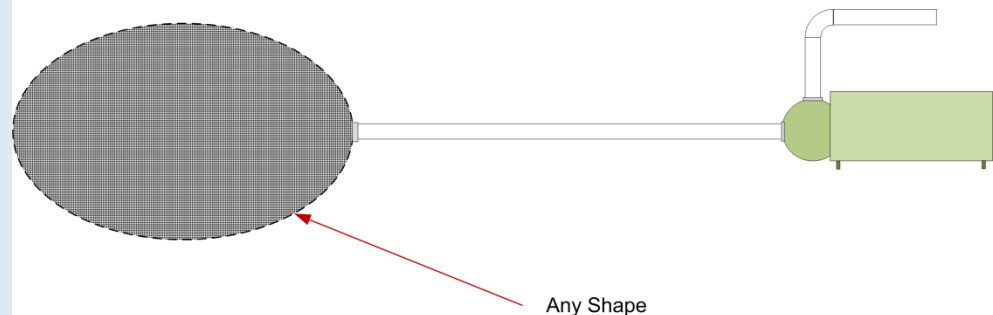


Optional Configuration



International Code Council®

Single Unblockable Drain: Of a size & shape such that the torso of the 99 percentile man (18" x 23" with 4 in. radius corners) cannot block it.

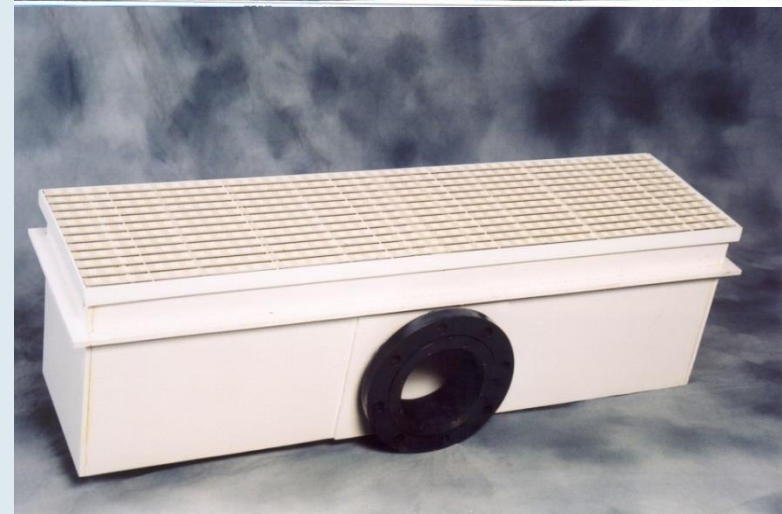
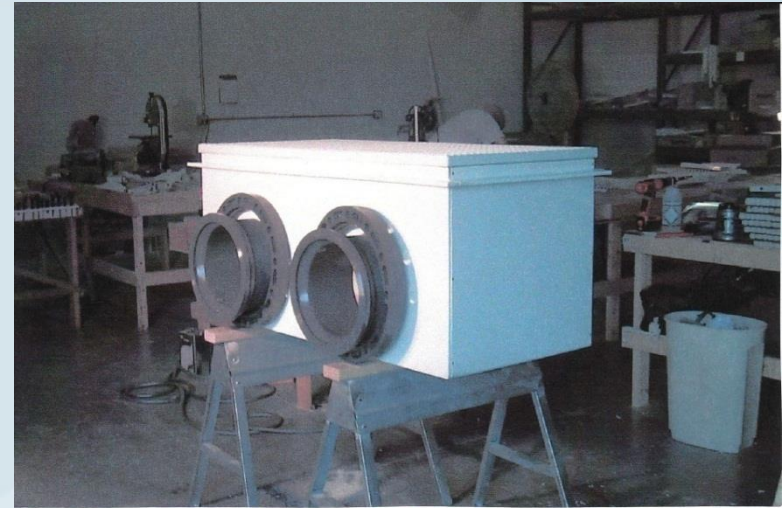
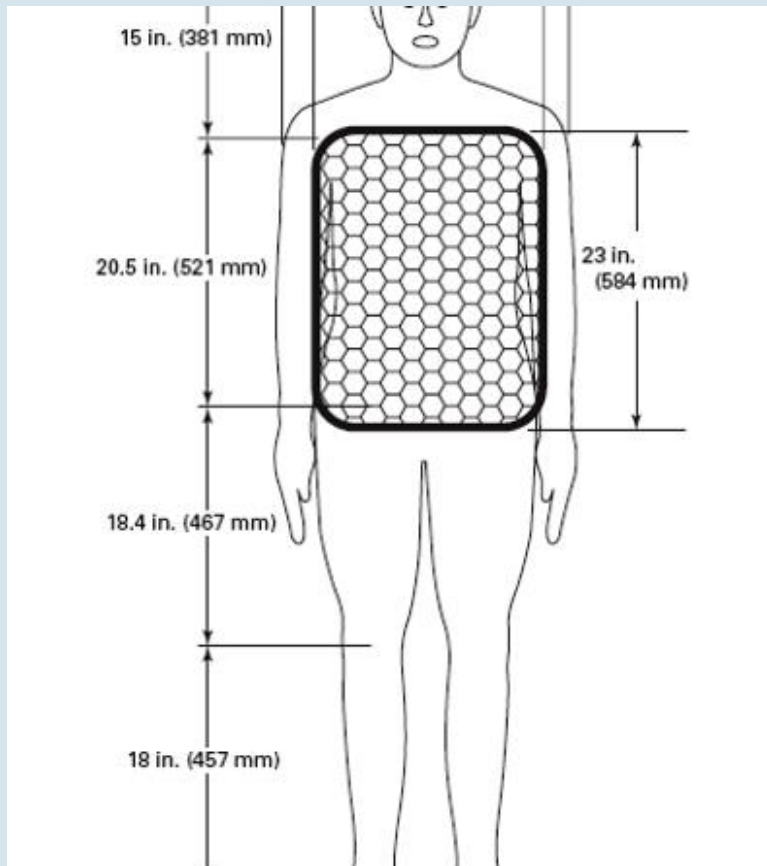


Channel Drain Example

- Single unblockable drain has no branch piping

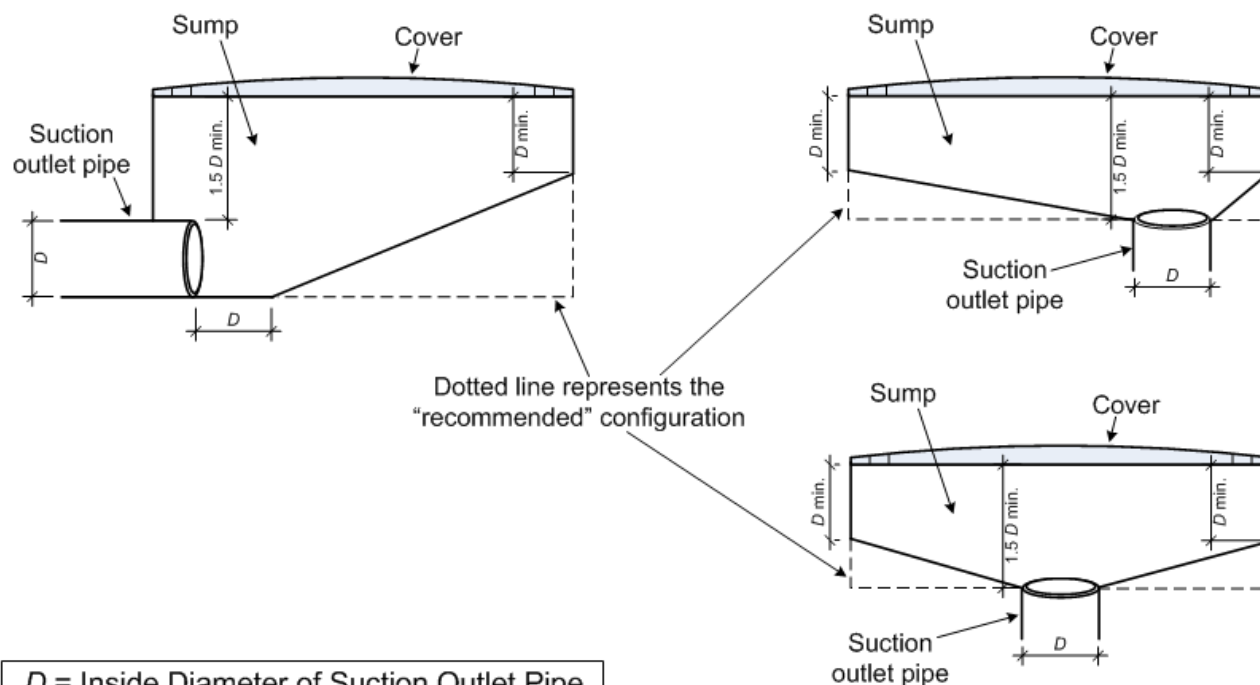


Single Unblockable Drains



Field Built Sumps

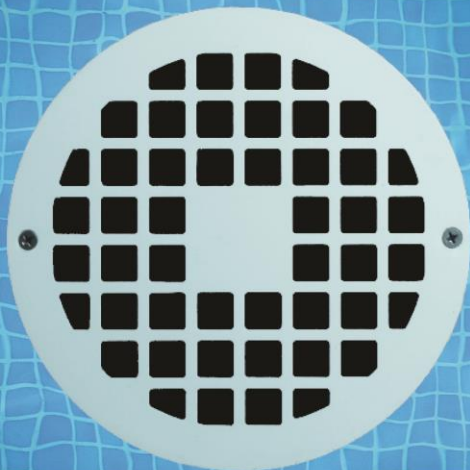
If manufacturer's instructions do not specify field built sump design they must be constructed as shown here



D = Inside Diameter of Suction Outlet Pipe

WHAT DOES A DANGEROUS DRAIN COVER LOOK LIKE?

Flat in shape • Large openings • Cover is damaged, loose or missing



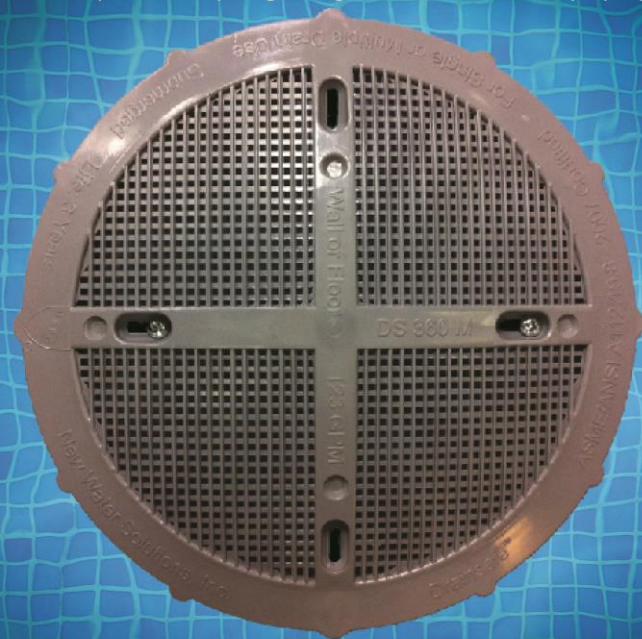
NEVER SIT ON OR PLAY NEAR ANY DRAIN.

If you spot a dangerous drain, get out immediately!
Contact the pool/spa owner or a pool professional.


abbey's HOPE
SAFER POOLS. SAFER KIDS.

WHAT DOES A SAFE DRAIN COVER LOOK LIKE?

Dome shaped • Small openings • Large surface area • Installed properly



CHECK DRAINS BEFORE ENTERING WATER.

Still concerned? Contact the pool/spa owner or a pool professional.
Never sit on or play near any drain.


abbey's HOPE
SAFER POOLS. SAFER KIDS.

Section 311

Circulation systems



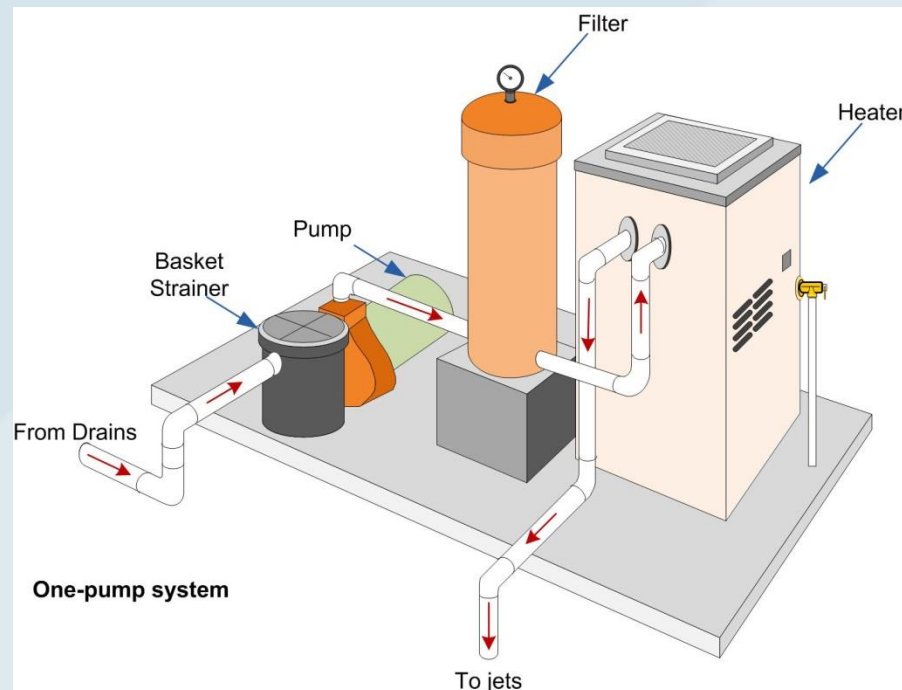
Section 311.2 System Design

- *A circulation system* consisting of pumps, piping, *return inlets* and outlets, *filters*, shall be provided.
- Wading pools and spas shall have separate dedicated filtering systems.
- **Note: submerged suction outlets are prohibited in newly constructed wading pools.**

Exception: Separate filtering systems are not required for *residential* pools and spas.

Section 311.2.1 Turnover rate

- The equipment shall be sized to turn over the volume of water that the pool or spa is capable of containing as specified in this code.



Section 311.2.2 Servicing

- Circulation system components that require replacement or servicing **shall be provided with access** for inspection, repair, or replacement
- and **shall be installed** in **accordance with the manufacturer's specifications**

Section 311.2.3 Equipment Anchorage

- Pool and spa equipment and related piping shall be designed and installed **in accordance with the manufacturer's installation instructions.**

Section 311.3 Water Velocity (cont.)

- Suction piping velocities shall be **6 fps (1.829 mps) for public pools** or **8 fps (2.438 mps) for residential pools**.

Sizing charts are available from manufacturers of PVC pipe, which illustrate flow rates in feet per second.

Section 311.4 Piping and Fittings

- Plastic pipe and fittings used in circulation systems ***shall be nontoxic*** and shall be able to ***withstand the design operating pressures.***
- Must comply with NSF 14 and be in compliance with one of the standards in Table 311.4.

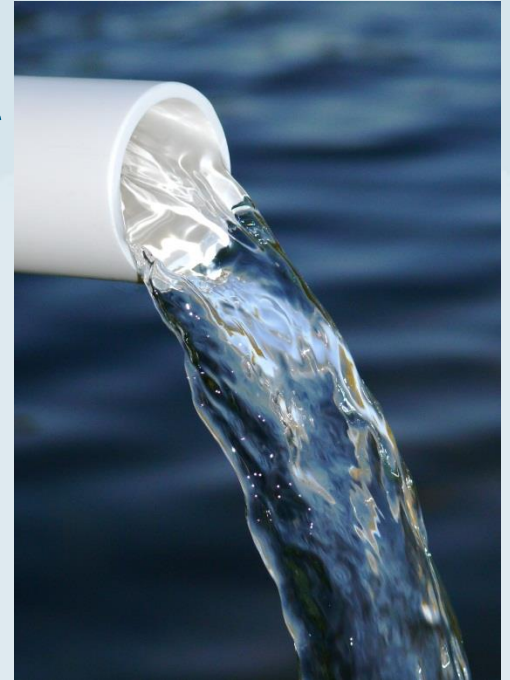


Table 311.4

Circulation System Pipe

Material	Standard
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 1527
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D 2846; CSA B137.6
Copper or copper-alloy tubing	ASTM B 88; ASTM B 447
Polyvinyl chloride (PVC) hose	ASTM D 1785; ASTM D 2241; ASTM D 2672; CSA B137.3
Polyvinyl chloride (PVC) plastic pipe	ASTM D 1785; CSA B 137.3
Stainless steel pipe, Types 304, 304L, 316, 316L	ASTM A 312

Section 311.4.1 Fittings

- Fittings shall comply with one of the standards in Table 311.4.1.
- **Exceptions:**
 1. Suction outlet fitting assemblies and manufacturer- provided components certified in accordance with ANSI/APSP 16
 2. Skimmers and manufacturer-provided components.
 3. Gutter overflow grates and fittings ***installed above or outside*** of the overflow point of the pool or spa.

Section 311.5 System Draining

Equipment shall be designed and fabricated to:

- Drain the water from the equipment with exposed face piping...
- Be in accordance with manufacturer's specifications.

Section 311.6 Pressure or Vacuum Gauge

Gauges shall be provided for public pools in the circulation system and have ready access.

Section 311.6 Pressure or Vacuum Gauge



Section 311.7 Flow Measurement

Public swimming pools and wading pools shall be equipped with a flow-measuring device



Section 311.8 Instructions



- Written operation and maintenance instructions shall be provided for the *circulation system of public pools.*

Section 311.9 Hydrostatic Pressure Test

Circulation system piping, shall be subjected to a hydrostatic pressure test of ***25 pounds per square inch*** (psi) (172.4 kPa).

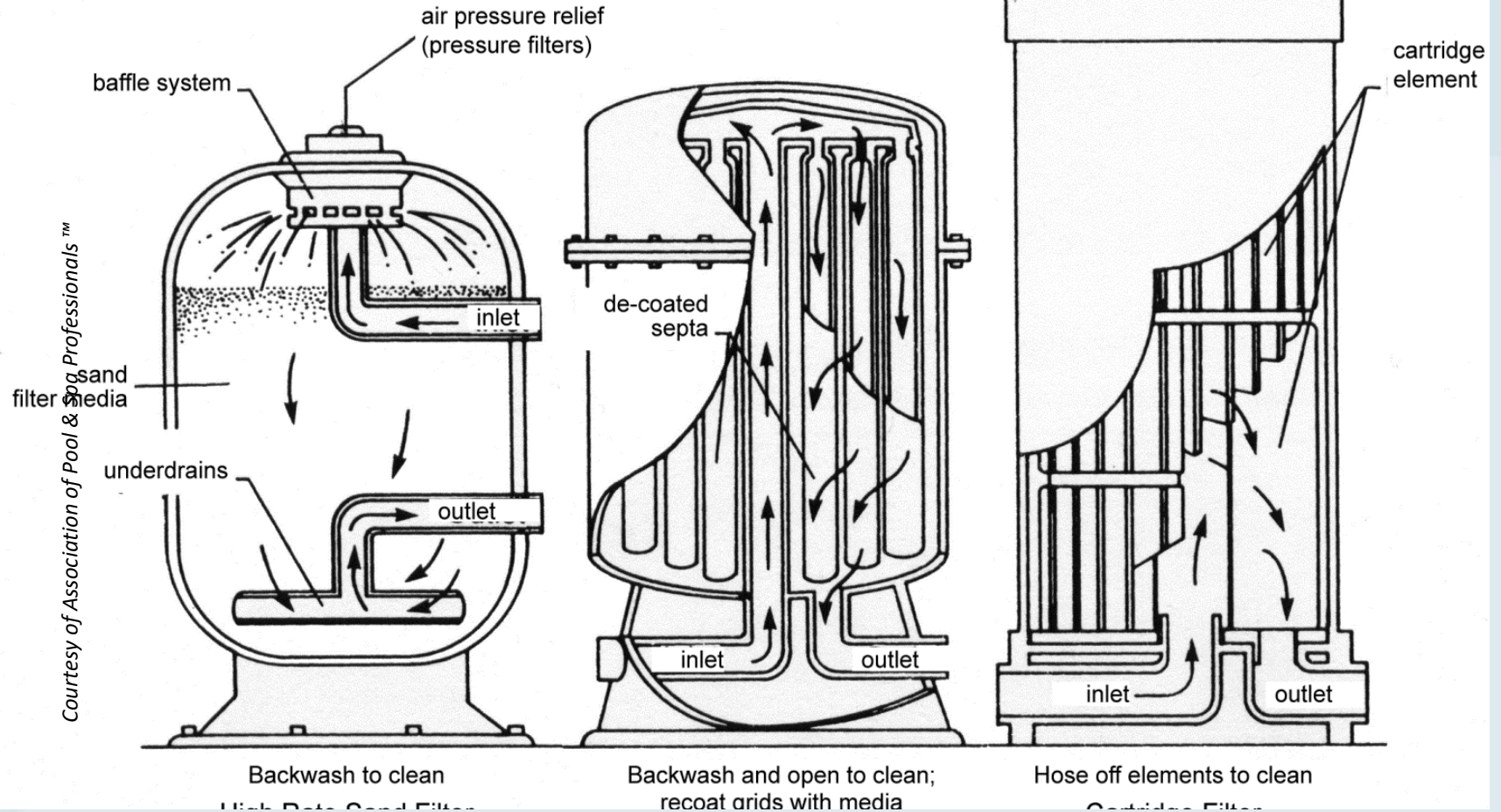
This pressure shall be held for ***not less than 15 minutes***.

Section 312

Filters



Section 312 Filters



Section 312.3 Internal Pressure

- For pressure-type filters, a means shall be provided to permit the release of internal pressure.

Section 312.3.1 Air release

- Filters with an automatic means of internal air release shall have one or more lids that provide a slow and safe release of pressure as a part of the design and
- Shall have an manual air release in addition to an automatic release.

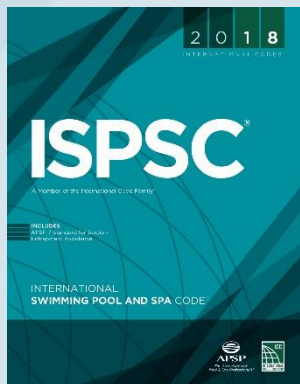
312.3.2 Separation Tanks

A separation tank used in conjunction with a filter tank shall have

- 1) a manual method of air release or
- 1) a lid that provides for a slow and safe release of pressure as it is opened

Section 313

PUMPS AND MOTORS



Section 313.2 Performance

- A pump shall be provided for circulation of the pool water.
- Be capable of providing the flow required for filtering the pool water against the total dynamic head developed by the complete system

Section 313.3 Intake protection

A cleanable strainer, skimmer basket, or screen shall be provided up stream to remove solids, debris, hair, and lint on pressure filter systems.

Section 313 Pump & Motors

- Pumps and motors shall be accessible for inspection and service in ***accordance with the manufacturer's specifications.***
- The design, construction, and installation of pumps and component parts shall be ***in accordance with the manufacturer's specifications.***

Section 313.6 Isolation Valves

- Shutoff valves shall be installed on the suction and discharge sides of pumps that are located below the waterline.
- Such valves shall be accessible.

Section 313.7 Emergency Shutoff Switch

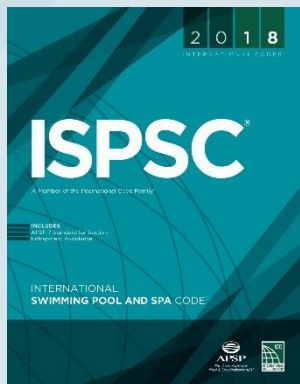
- An emergency shutoff switch shall be provided to disconnect all power located not less than 5 feet (1524 mm) from the inside walls of the pool or spa.
- **Exception:** Aboveground and permanent inground residential swimming pools.

Section 313.8 Motor Performance

Motors shall comply with UL 1004-1, UL 1081, CSA C22.2 No. 108 or the relevant motor requirements of UL 1563 or CSA C22.2 No. 218.1, as applicable.

Section 314

Return and Suction Fittings



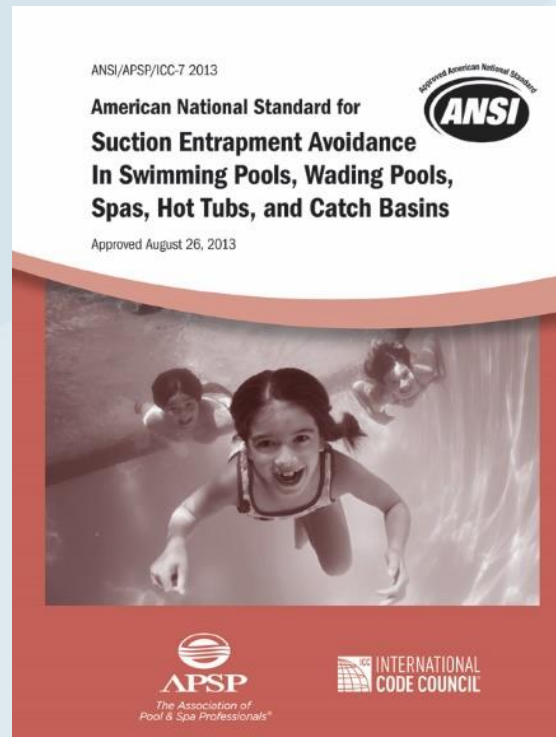
Section 314.1 General

- The provisions of this section apply to return and suction fittings for pools and spas.

Exception: Portable residential hot tubs and exercise spas.

Section 314.2 Entrapment Avoidance

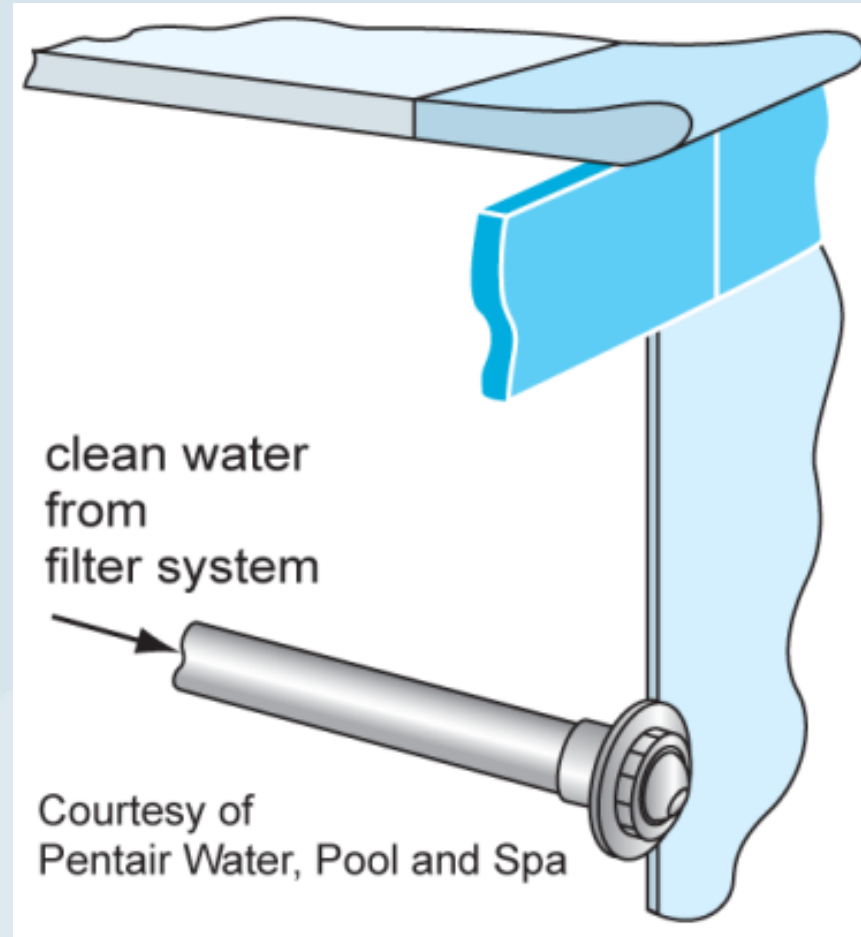
- Entrapment avoidance shall be in accordance with Section 310.



Section 314.3 Flow Distribution

The suction outlet fitting assemblies, where installed, and the skimming systems shall each be designed to accommodate ***100 percent*** of the circulation turnover rate.

Section 314.4 Return Inlets



Section 303

Energy Requirements



Section 303 Energy

- **303.1 General.** The energy requirements for pools and inground permanently installed spas shall be as specified in Sections 303.2 through 303.4 and APSP 15.
- The energy requirements for factory built residential portable electric hot tubs shall be in accordance with APSP 14.

Section 303.2 Heaters



- Heaters shall be equipped with an external on-off switch to allow the heater to be shutoff without adjusting the thermostat setting.
- Gas-fired heaters shall not be equipped with continuous pilot burners.
- **Exception:** *Portable residential hot tubs and exercise spas.*

Section 303.3 Time switches

- Time switches or other control methods shall be installed with or on all heaters and pumps.
- Heaters, pumps and motors that have built-in timers shall be deemed in compliance with this requirement.

Section 303.3

- **Exceptions:**

1. Where public health standards require 24-hour pump operation.
2. Pumps that operate solar or waste-heat recovery pool heating systems.
3. Portable residential hot tubs and exercise spas.

Section 303.4 Covers

- Heated pools and inground permanently installed spas shall be provided with a vapor retardant cover.

Exception: Where more than 70 percent of the energy for heating, computed over an operating season, is from site recovered energy such as from a heat pump or solar energy source.

APSP-15: System Piping & Circulation

- Pool piping and pipe fittings must be sized so that the velocity of the water at maximum design flow does not exceed 8 feet per second in the return line and 6 feet per second in the suction line.

Pipe Size	1.5"	2"	2.5"	3"	3.5"	4"	5"	6"
Nominal GPM @ 6fps	38	63	90	138	185	238	374	540
Nominal GPM @ 8fps	51	84	119	184	247	317	499	720

Section 315

Skimmers



Section 315.1

Applies to skimmers for all pools and spas.

- **Exception:** residential portable hot tubs and exercise spas.
- **Exception:** Aboveground pools

Section 315.2 Required Skimmers

A surface skimming system for public pool and spa shall be provided and be in compliance with NSF 50.

Exception: Public pools designed in accordance with Chapter 6.

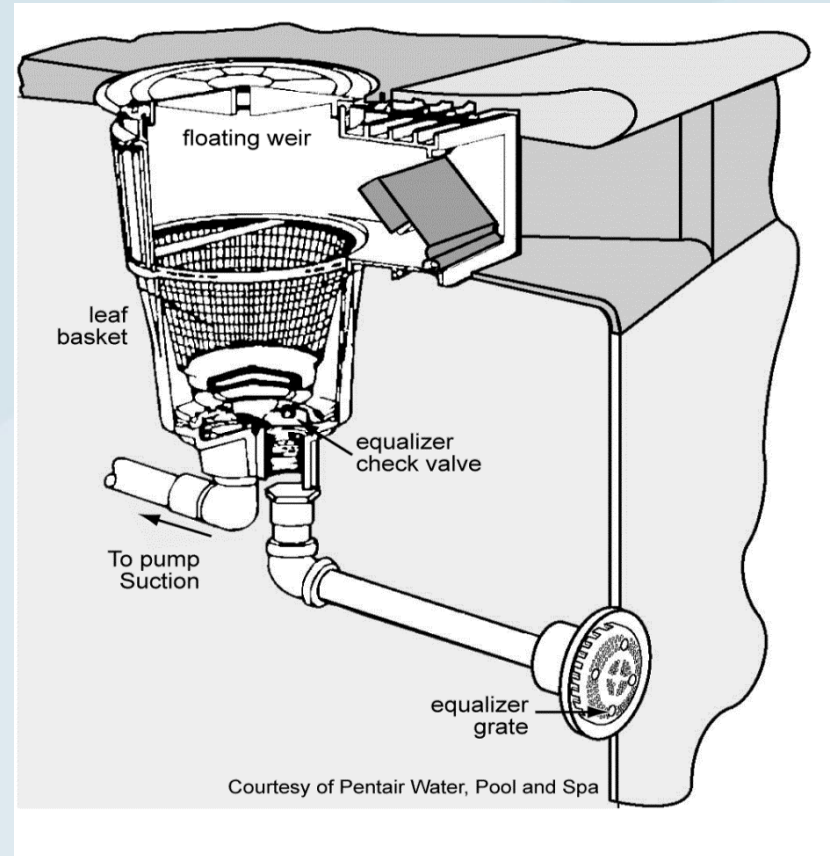
Section 315.4

- Perimeter skimming systems **are not required** to be completely around the pool
- but must occupy at least **50 percent of the perimeter.**



Section 315.5 Equalizer Lines

- Because the inlet of the equalizer pipe could constitute a suction inlet, **equalizers are prohibited in new construction.**



Section 316

Heaters



Section 316.4.1 Temperature

A means shall be provided to monitor water temperature.

Section 316.4.2 Access Prohibited

For public pools and spas, public access to controls **shall not** be allowed.



International Code Council®

Section 319

Sanitizing Equipment



Section 319.1 Equipment Standards

- Sanitizing equipment installed in public pools and spas shall be capable of introducing the quantity of sanitizer necessary to maintain the appropriate levels under all conditions of intended use.



Section 319.2 Chemical Feeders

- Where installed, chemical feed systems shall be installed in accordance **with the manufacturer's specifications.**
- Chemical feed pumps shall be wired so that they cannot operate unless there is adequate return flow to disburse the chemical throughout the pool as designed.

Section 320

Waste Water Disposal



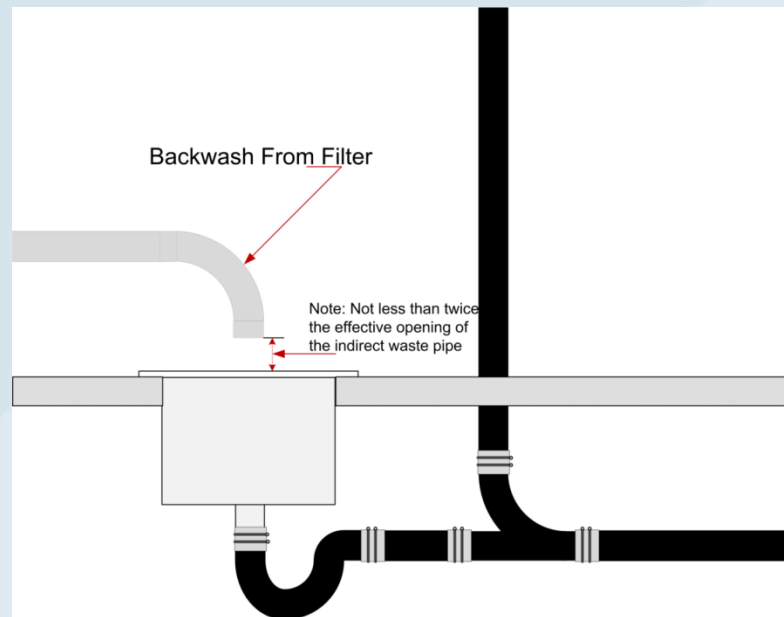
Section 320.1 Backwash Water or Drainage Water

- Shall discharge to
 - Sanitary sewer
 - Storm sewer
 - Approved disposal system on the premises
 - Other means approved by State or Local Authority



Section 320.1

- Direct connections shall not be made between the end of the backwash line and the disposal system. **Drains shall discharge through an air gap.**



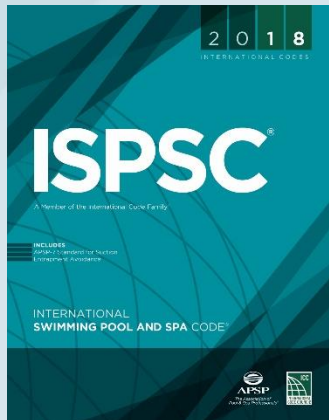
Section 320.2 Water Salvage

Back wash water can return to the pool only after:

- Water has been filtered to remove particulates
- Treated to eliminate coli form bacteria & waterborne pathogens
- And such return has been approved by the state or local authority

Chapter 7

Onground Storable Residential Swimming Pools



Section 701.4

- The manufacturer's name and the liner identification number shall be affixed to the liner.
- For aboveground pools without a liner, the manufacturer's name and identification number shall be affixed to the exterior of the pool structure.

Section 702

- 702.1 Pools shall have a means of entry and exit consisting of not less than one ladder or a ladder and staircase combination.
- 702.2.1 Ladders in the pool shall have a physical barrier to prevent children from swimming through the riser openings or behind the ladder.

Signs to be installed prior to final inspection

Safety signage such as “NO DIVING” signs and other safe use instruction signs that are provided by the pool and ladder manufacturer **shall be posted** in accordance with the manufacturer’s instructions prior to final inspection.

Chapter 8

Permanent Inground Residential Swimming Pools



Construction tolerances

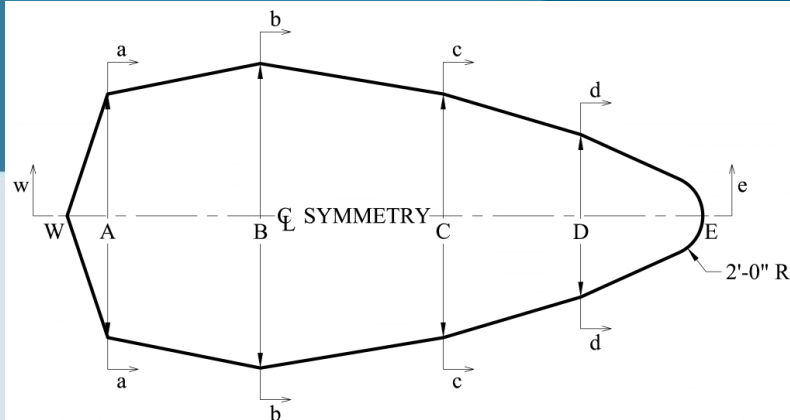
- The overall length, width and depth of the pool shall be ± 3 inches (76 mm). The construction tolerance
- For all other dimensions shall be ± 2 inches (51 mm), unless otherwise specified by the design engineer.

Table 1. Minimum diving water envelope for swimming pools designated types I-V

Pool Types	Minimum Depths at Point				Minimum Widths at Point				Minimum Lengths between Points					
	A	B	C	D	A	B	C	D	WA	AB	BC	CD	DE	WE
0	Manufactured diving equipment is prohibited													
1	6' 0" (1.82 m)	7' 6" (2.29 m)	5' 0" (1.52 m)	2' 9" (838 mm)	10' 0" (3.05 m)	12' 0" (1.52 m)	10' 0" (3.05 m)	8' 0" (2.44 m)	1' 6" (457 mm)	7' 0" (2.13 m)	7' 6" (2.29 m)	Varies	6' 0" (1.82 m)	28' 9" (8.76 m)
2	6' 0" (1.82 m)	7' 6" (2.29 m)	5' 0" (1.52 m)	2' 9" (838 mm)	12' 0" (3.66 m)	15' 0" (4.57 m)	12' 0" (3.66 m)	8' 0" (2.44 m)	1' 6" (457 mm)	7' 0" (2.13 m)	7' 6" (2.29 m)	Varies	6' 0" (1.82 m)	28' 9" (8.76 m)
3	6' 10" (2.08 m)	8' 0" (2.44 m)	5' 0" (1.52 m)	2' 9" (838 mm)	12' 0" (3.66 m)	15' 0" (4.57 m)	12' 0" (3.66 m)	8' 0" (2.44 m)	2' 0" (610 mm)	7' 6" (2.29 m)	9' 0" (2.74 m)	Varies	6' 0" (1.82 m)	31' 3" (9.53 m)
4	7' 8" (2.34 m)	8' 6" (2.59 m)	5' 0" (1.52 m)	2' 9" (838 mm)	15' 0" (4.57 m)	18' 0" (5.49 m)	15' 0" (4.57 m)	9' 0" (2.74 m)	2' 6" (762 mm)	8' 0" (2.44 m)	10' 6" (3.20 m)	Varies	6' 0" (1.82 m)	33' 9" (10.3 m)
5	8' 6" (2.59 m)	9' 0" (2.74 m)	5' 0" (1.52 m)	2' 9" (838 mm)	15' 0" (4.57 m)	18' 0" (5.49 m)	15' 0" (4.57 m)	9' 0" (2.74 m)	3' 0" (914 mm)	9' 0" (2.74 m)	12' 0" (3.66 m)	Varies	6' 0" (1.82 m)	36' 9" (11.2 m)

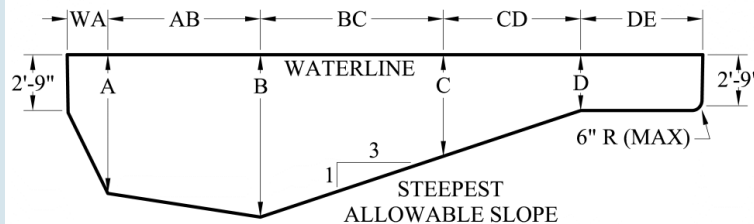
NOTES

1. Minimum length between points CD may vary based upon water depth at point D and the slope between points C and D.
2. Drawings are not to scale.
3. Negative construction tolerances (see para. 5.1.1) shall not be applied to any of the dimensions shown in the Minimum Water Envelopes given in Table 1.
4. Pool types designate minimum water envelope sizes as specified by the diving board manufacturers.

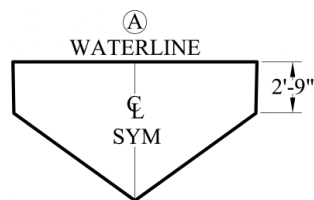


MINIMUM WATER SURFACE SHAPE - PLAN VIEW

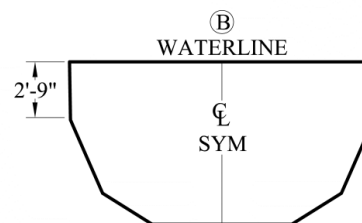
NOTE: 'W' EQUATES TO DEEP END WALL



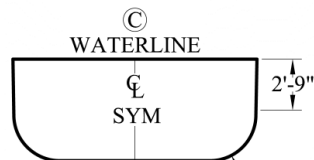
MINIMUM WATER DEPTHS - SECTION w-e



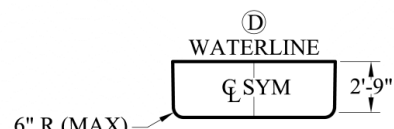
SECTION a-a



SECTION b-b



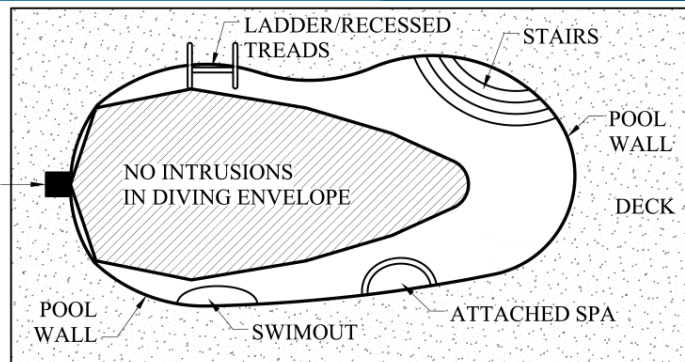
SECTION c-c



SECTION d-d

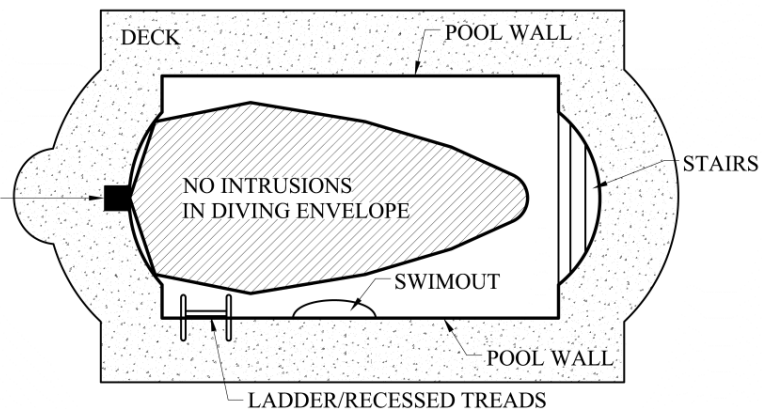
EXAMPLE A

STATIONARY
DIVING
PLATFORM
AND ROCKS



EXAMPLE B

STATIONARY
DIVING
PLATFORM
AND ROCKS

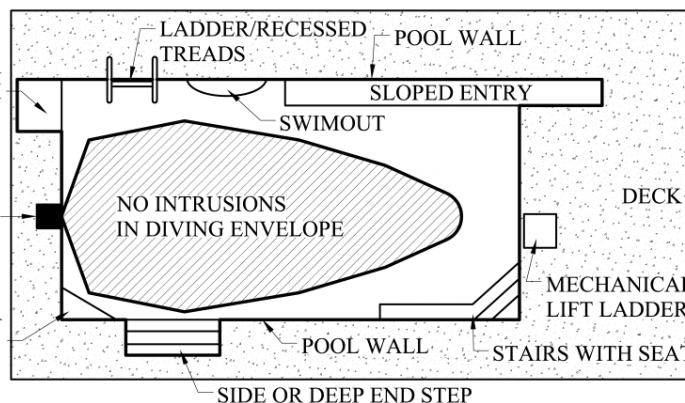


EXAMPLE C

UNDERWATER
SEAT OR BENCH

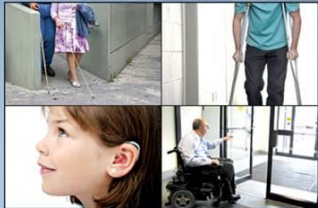
STATIONARY
DIVING
PLATFORM
AND ROCKS

UNDERWATER
SEAT



Swimming Pool & Accessibility Requirements

“Per Accessible and Usable Buildings and Facilities-ICC A117.1-2017”



**ACCESSIBLE AND
USABLE BUILDINGS
AND FACILITIES**

ICC A117.1-2009

American National Standard



Section 1109.1.1

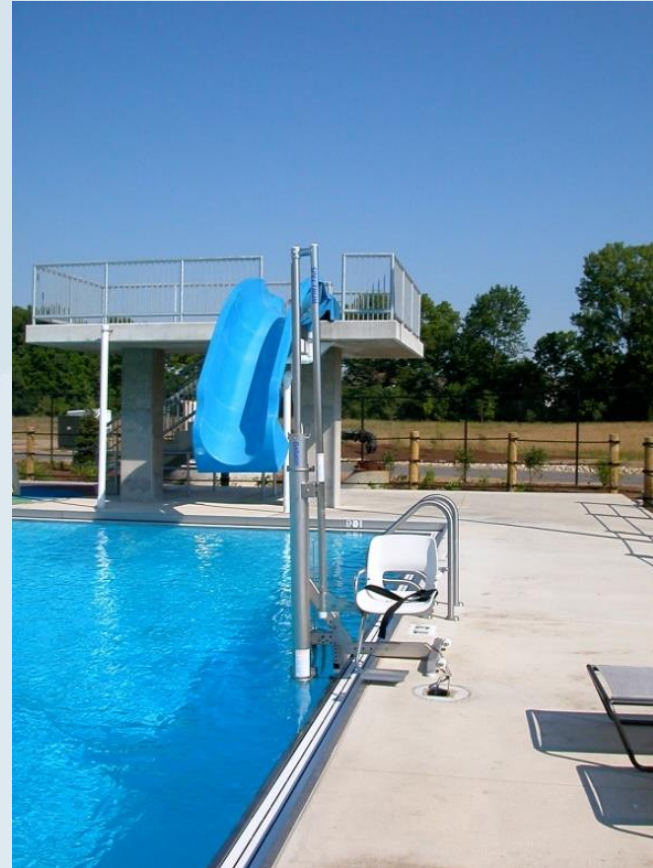
- Two accessible means of entry for swimming pools
 - Swimming pool lift
 - Sloped entries, transfer walls, transfer systems, and pool stairs
 - **Exception:** swimming pool that has less than 300 linear feet (91 m) of swimming pool wall.

(Only one accessible means of entry required.)



Sloped Entries

International Code Council®



Pool Lift

International Code Council®

Section 1109.1.2 Wading Pools

- At least one sloped entry shall be provided in wading pools.

Section 1109.2

Pool Lifts

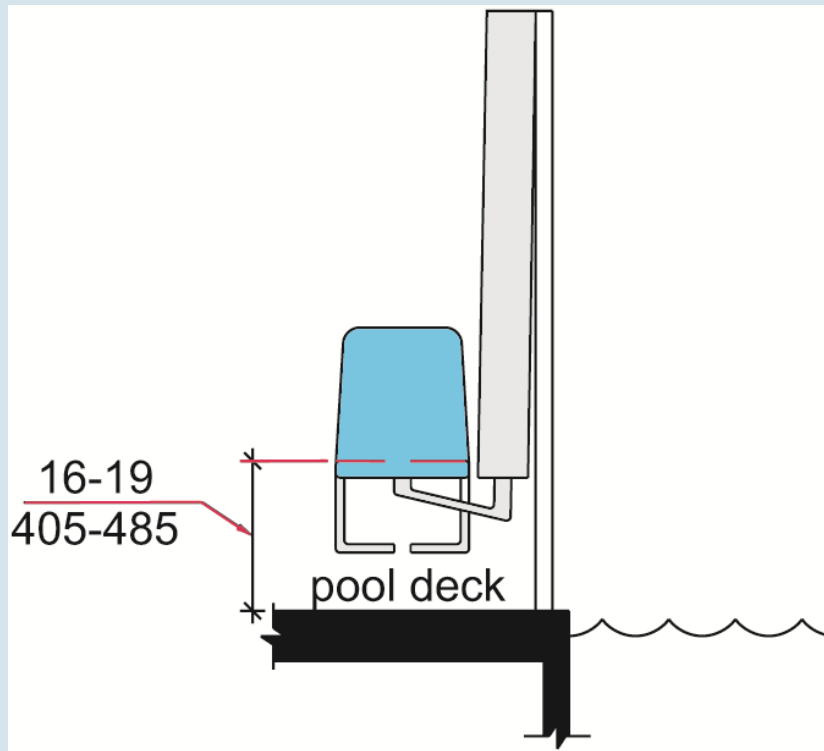


Figure 1109.2.4
Pool Lift Seat Height

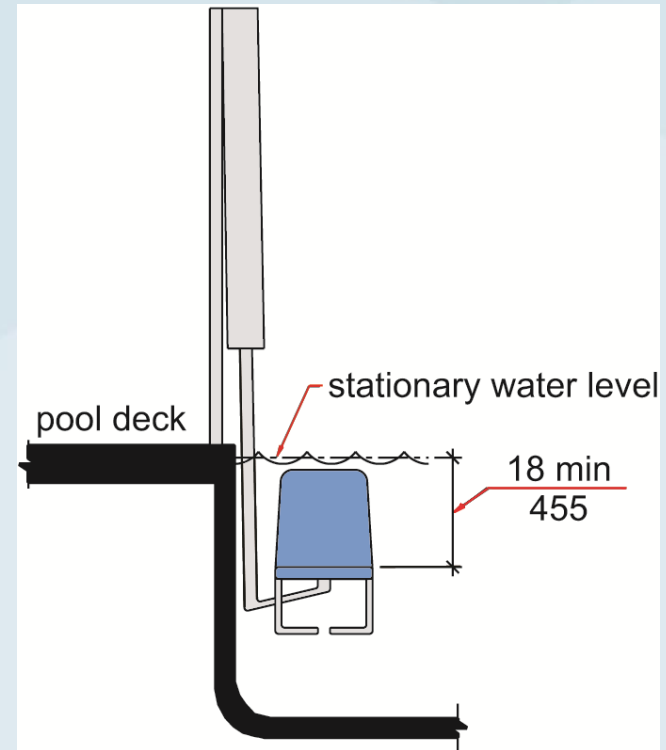


Figure 1109.2.8
Pool Lift Submerged Depth

Section 1109.3

Sloped Entry Route

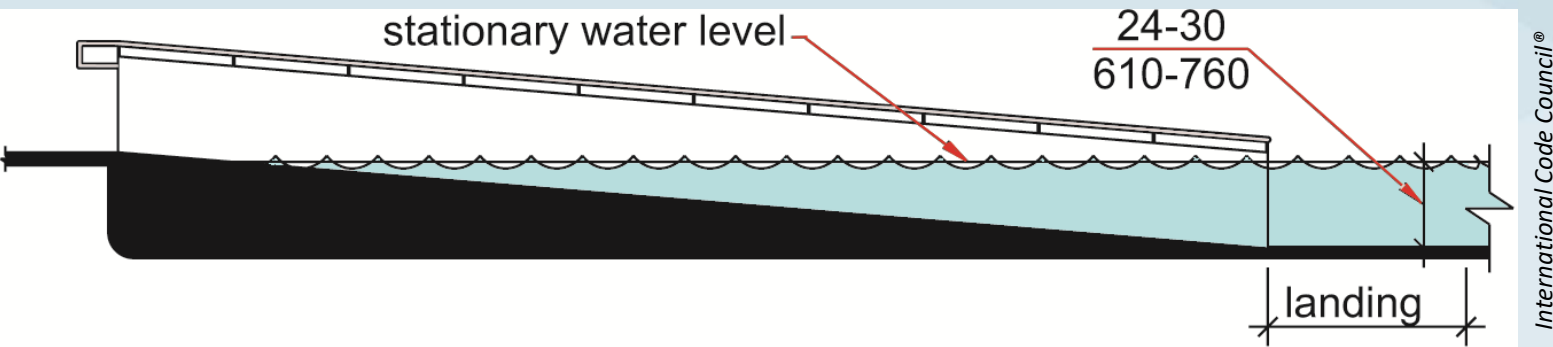


Figure 1109.3.2
Sloped Entry Submerged Depth

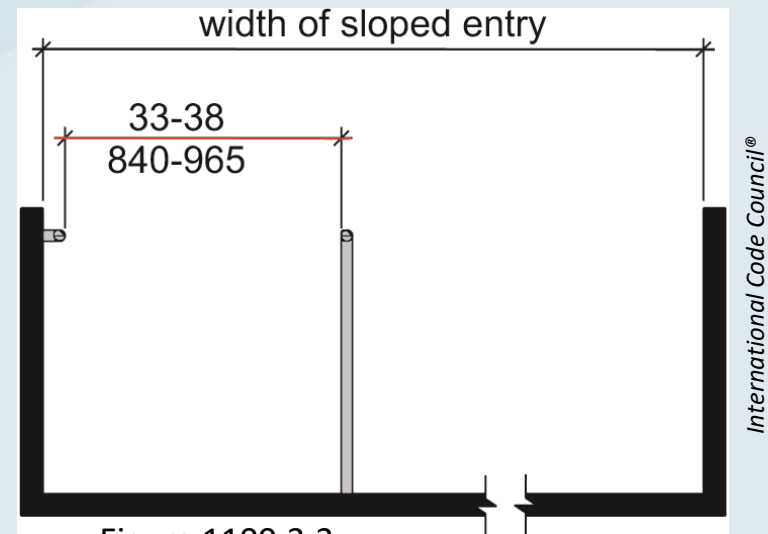
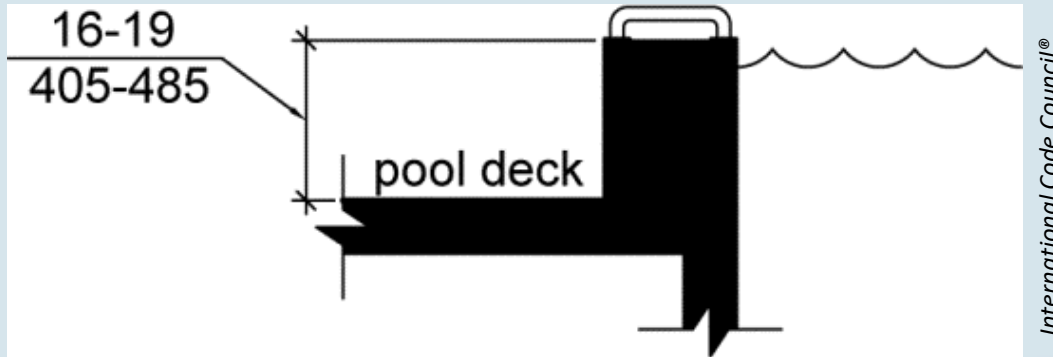
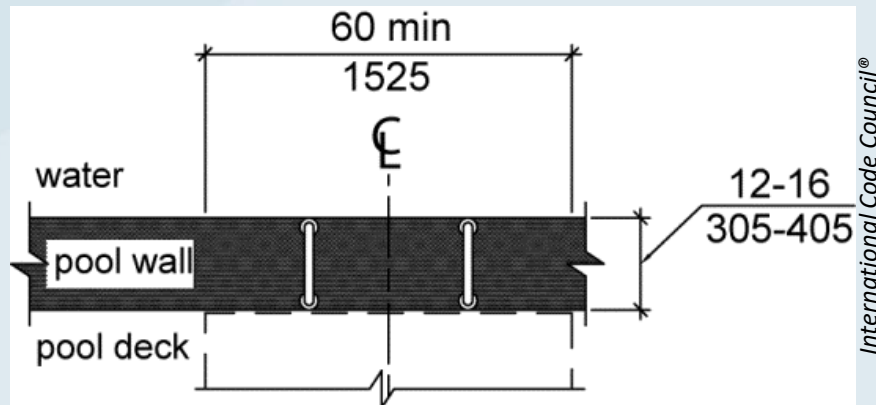


Figure 1109.3.3
Handrails For Sloped Entry

Section 1109.4 Transfer Walls



Section 1109.4.2 Transfer Wall Height



Section 1109.4.3 Depth and Length of Transfer Walls

Summary/Question & Answer/Discussion



Thank You For Attending

Sponsored by

ORACLE®