Building & Zoning Department

Typical Pool Detail

Updated 7/20/2023

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- Construction must be in strict conformance with the details contained herein. The use of this Typical Pool Detail does not relieve the permit holder of responsibility to follow all manufacturer requirements and all applicable codes. The current edition of the International Swimming Pool and Spa Code must be followed for the pool to be compliant & safe. The current edition is SBC-14; the State amended 2018 International Swimming Pool and Spa Code, also known as the 2021 RISPSC.

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When a Pool Permit is Required:

- The Rhode Island Swimming Pool and Spa Code (RISPSC, 2018 as amended, promulgated as the 2021 SBC-14 State Pool & Spa Code) says a swimming pool or spa is a structure that requires a building permit; SBC §113.1.
  This Code defines pools and spas (aquatic recreation facilities) as being permanent or temporary, and are designed & manufactured to be connected to a circulation system, and that are intended for swimming, bathing or wading. This includes existing, moved or relocated, and new aquatic facilities.

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General Notes:

- Town of Smithfield Zoning defines Swimming Pools as:

  An artificial pool of water or natural pool with a depth of two (2) feet or more at any point or 75% or more square feet of surface and used for swimming or bathing, located indoors or outdoors, together with the equipment, and appurtenances used in connection with the pool.

- This means that a swimming pool may not require zoning approval if it is not as defined above **but** will still require building permits if as defined in the RISPSC, SBC-14.

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What Inspections You May Need

- The law requires inspections to ensure it is safe and installed as the Code and manufacturer requires. Not all inspections below will apply to your pool or spa and some may be done simultaneously, but the minimum inspections that are typically needed are as follows:
  - **Flood Hazard Areas**: Applies only in flood hazard areas.
  - **Hole/Excavation Inspection**: To assure level and stone free land.
  - **Underground Inspection**: This is wiring that will serve the pool and its equipment.
  - **Grounding/Bonding**: This may include but is not limited to gas pipe, concrete slab reinforcement, wet niche fixtures, and more.
  - **Concrete form inspection**: After forms are and reinforcement is in place but before the pour.
  - **Underground/concealed piping inspection**: Before trench or concrete cover up; must see pipe lables.
  - **Equipment inspection**: Circulation, filtration, pumps, skimmers, lighting, diving equipment, etc.
  - **Energy Consumption**: Pool heaters, timed switches, powered covers, etc.
  - **Barrier Inspection**: Barriers can be your home, a fence, or even natural topography. This must be in place for the Letter of Completion to be issued.
  - **Final Inspection**: All separately permitted & pool subordinate buildings (cabana, pool house) as well as all associated mechanical or wiring, must first have final approval before the pool or spa.
- It is the responsibility of the permit holder to request inspections through the permits online portal or by phone at (401)233-1039 or at https://www.smithfieldri.gov/departments/building-zoning.
- Manufacturer's installation instructions must also be on job site at the time of inspection or attached to the online permit application. In the case of conflict between the manufacturer's installation instructions and the code, the more stringent shall prevail.

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Definitions:

- **Residential Swimming Pool** : A pool intended for use that is accessory to a *residential* setting and available only to the household and its guests. Other pools shall be considered public pools.
- **Barrier** : A permanent fence, wall, building wall, or combination thereof that completely surrounds the aquatic vessel and obstructs the access to the vessel. Permanent shall mean "not being able to be removed, lifted, or relocated without the use of a tool."
- **Approved** : Acceptable to the code official or authority having jurisdiction.
- **Spa**: A product intended for the immersion of persons in temperature-controlled water circulated in a closed system, and not intended to be drained and filled with each use. A spa usually includes a filter, an electric, solar or gas heater, a pump or pumps, and a control, and can include other equipment, such as lights, blowers, and water-sanitizing equipment

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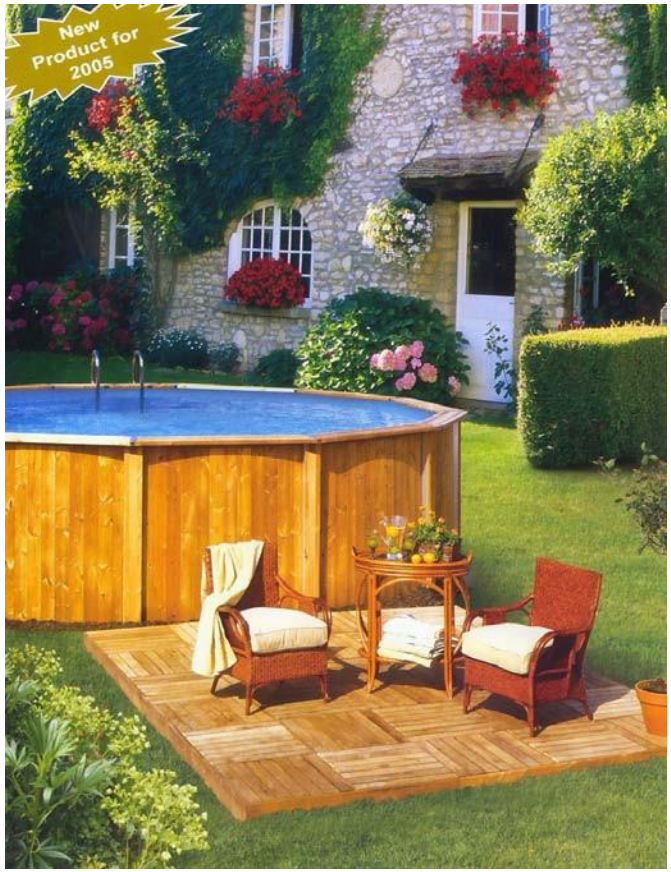
Barriers, House Wall:

This section addresses requirements where the house serves as a part of the barrier for the pool. One of the following three protections are required by the ISPSC.



Where a wall of a dwelling or structure serves as part of the barrier, doors and operable windows with a sill height of less than 48 inches (1219 mm) that provide direct access to the aquatic vessel through the wall, shall be equipped with one or more of the following:

1. An alarm that produces an audible warning when the door or its screen or window, is opened. The alarm shall be listed and labeled as a water hazard entrance alarm in accordance with UL 2017. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings or structures required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the threshold of the door.

2. A safety cover that is listed and labeled in accordance with ASTM F 1346.

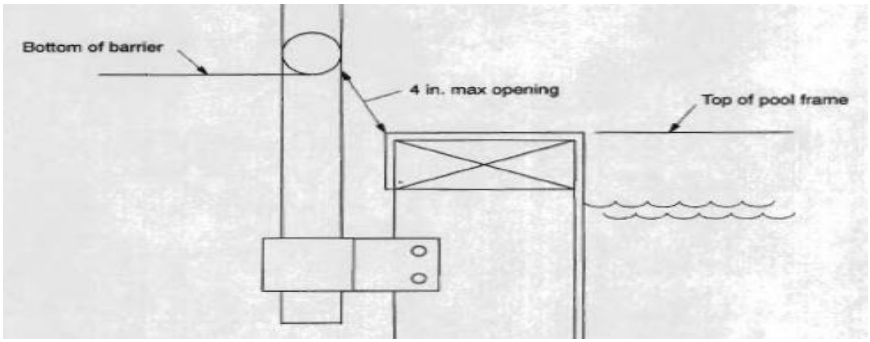
3. An approved means of protection, such as self-closing doors with self-latching devices, provided that the degree of protection afforded is not less than the protection afforded by Items 1 or 2.

updated 5/1/15

Barriers, Other Types:

All barriers must be 48” tall and resistant to climbing or a child’s passage through barrier in-fills as detailed in the following requirements. No barrier may be installed in a location that allows assistance from another permanent structure to defeat the security of the barrier byclimbing.

If the pools walls are 48” or taller, the pool itself may be used as a barrier. If the walls are less than 48” the barrier may be attached to the pools’ frame as shown in the diagrams left and below. Attachment to the frame may not allow a gap larger than 4”. Separate barrier walls may be flush with grade or as much as 2” above grade.



If the pool itself is used as a barrier and access to the pool is only possible by a ladder or steps, the ladder or steps must either be lockable, securable or removable, or the ladder or steps themselves be barrier protected as well. Ladders that are individually protected by a barrier must have barriers that meet the barrier requirements detailed in this Guide. When secured, a ladder or steps may not create an opening ≥4". The barrier shall be installed per manufacturer's instructions.

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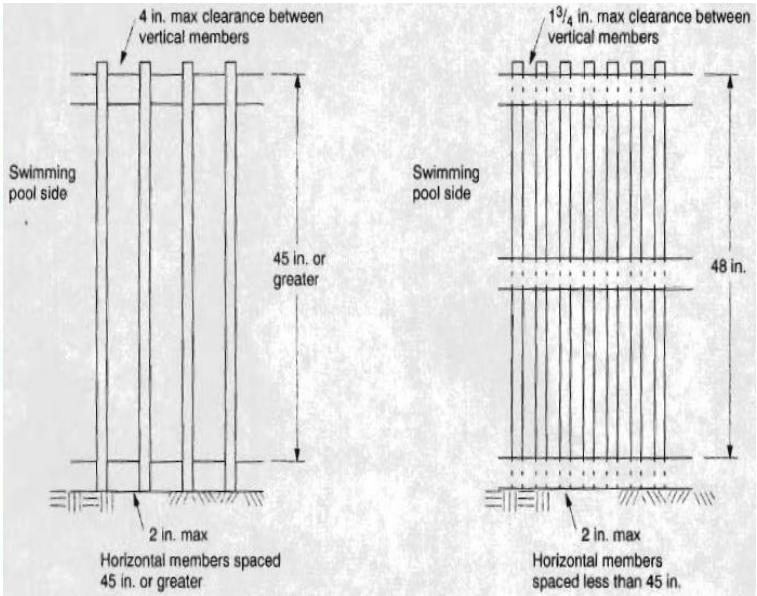

Above are examples of typical fences. The measurement minimums and maximums show in detail the distance in-fills (pickets) may be from one another when the horizontal members holding them are installed at different intervals. Note that the minimum barriers overall height of 48” must still be accomplished.

Here are examples of stone walls that are acceptable as barriers. The key to each is that the walls are not able to be climbed over because a foothold isn’t in evidence.

Lattice fencing may also be an approved barrier. An example of a lattice installation is shown here. Note that the largest opening allowed is 1¾” or less.

The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the aquatic vessel. Such height shall exist around the entire perimeter of the vessel and for a distance of 3 feet (914 mm) where measured horizontally from the required barrier.

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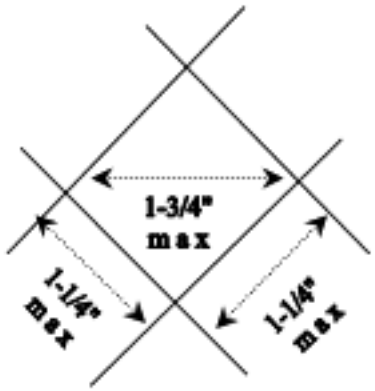
Barriers, Other Types:

All barriers must be 48” tall and resistant to climbing or a child’s passage through barrier in-fills as detailed in the following requirements. No barrier may be installed in a location that allows assistance from another permanent structure to defeat the security of the barrier byclimbing.



A chain link fence is acceptable so long as the links are not separated in excess of the diagram shown at left. A sample installation is shown at right.

A fence with slats fastened at the top & bottom may reduce the openings to a maximum of 1 ¾”.

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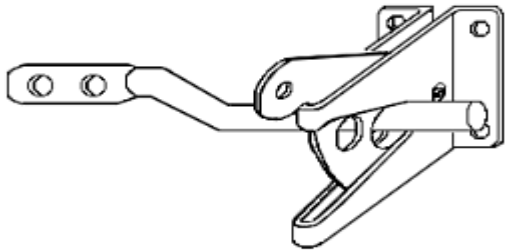
Barriers, Other Types:

All gates into pools and their areas, whether for pedestrians or equipment, must meet all the listed requirements where openings, heights and climb-ability is concerned and have locking devices. In addition, pedestrian gates must open outward and away from the pool, be self closing and have self latching devices.



Okay if mounted at required height

The gate shown at left is an example of a self closing pool gate with a latch in excess of 54" from the gates bottom. Code requires that **if the pools self latching mechanism is less than 54" from the bottom of the gate, the release and mechanisms for it must be:**

- **on the inside of the pool gate at least 3" from the top of the gate AND,**
- **the gate and barrier cannot have any openings larger than ½" within 18" of the release.**

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Circulation Piping and fittings:

All pools and spas circulation piping and fittings are not plumbing so the piping and fittings you can use must be listed in the amended 2018 RI Pool/Spa Code **OR** the piping must be specifically Approved as an alternative material, design or construction method. That means the piping/fittings must be within the intent of Code and no less safe (quality, strength, effectiveness, and durability) than the prescribed piping listed in the Code.

- **So how do I know if this piping/fitting is okay to use?**

  First thing is to read the Code. The Code requires plastic piping comply with both NSF 14 and any one of the listed ASTM or CSA testing standards, whether plastic or metal. The Code also requires that fittings comply with any one of the listed ASTM, CSA, or ASME standards.

This piping is often bought, but it is not listed in the pool/spa code.

- **That piping is not available. What else can I do?**

  There are two options:
  1. Provide an authenticated report from the States Building Code Committee (whom serves the State Building Code Commission) that a submitted test method has been Approved for a pool/spa identical to yours. See the details at this link.
  2. Submittal of an Approved modification or variance to the State Board of Appeals. The appeals process may be found at this link.

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Circulation Piping Continued:

If you aren't sure what piping is listed in the Pool/Spa Code, take a look below

TABLE 311.4.1
CIRCULATION SYSTEM FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D1527
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; ASTM F437; ASTM F438; ASTM F439; CSA B137.6
Copper or copper-alloy tubing	ASME B16.15
Polyvinyl chloride (PVC) plastic pipe	ASTM D2464; ASTM D2466; ASTM D2467; CSA B137.2; CSA B137.3
Stainless steel pipe, Types 304, 304L, 316, 316L	ASTM A182; ASTM A403

TABLE 311.4
CIRCULATION SYSTEM PIPE MATERIAL STANDARD

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D1527
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D2846; CSA B137.6
Copper or copper-alloy tubing	ASTM B88; ASTM B447
Polyvinyl chloride (PVC) hose	ASTM D1785; ASTM D2241; ASTM D2672; CSA B137.3
Polyvinyl chloride (PVC) plastic pipe	ASTM D1785; CSA B137.3
Stainless steel pipe, Types 304, 304L, 316, 316L	ASTM A312

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Electrical Requirements:

Per the ISPSC Section 302 Electrical requirements for aquatic facilities must comply with SBC-5 NFPA 70

Please talk with the inspector of wiring if you are unsure what is required for wiring methods, bonding, and more.

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