



# Typical Residential Pools, Spas, and Hot Tubs Plan Specifications

(Specifications per current VUSBC)

Version 2021-08-12

**GENERAL REQUIREMENTS** (applies to all residential pools, spas, and hot tubs per 2018 ISPC)

## Construction Tolerances

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

## Materials of Components and Accessories

- The materials of components and accessories used for permanent in ground residential swimming pools shall be suitable for the environment in which they are installed. The materials shall be capable of fulfilling the design, installation and the intended use requirements in the International Residential Code.

## Structural Design

- The structural design and materials shall be in accordance with the *International Residential Code*.

## Diving Envelopes

- The minimum diving water envelopes shall be in accordance with Table 804.1 and Figure 804.1. Negative construction tolerances shall not be applied to the dimensions of the minimum diving water envelopes given in Table 804.1.

## Offset Ledges Maximum Width

- Offset ledges shall be not greater than 8 inches (203 mm) in width.

## Floor Slope: Shallow to Deep Transition

- The shallow to deep area floor slope transition point, shall occur at a depth not less than 33 inches (838 mm) below the *design waterline* and at a point not less than 6 feet (1829 mm) from the beginning of the shallow end.

## Manufactured Diving Equipment

- Manufactured diving equipment shall be designed for swimming pool use.

## Installation

- Where manufactured diving equipment is installed, the installation shall be located in the deep area of the pool so as to provide the minimum dimensions as shown in Table 804.1 and shall be installed in accordance with the manufacturer's instructions.

## Slides

- Slides shall be installed in accordance with the manufacturer's instructions.

## Entry and Exit

- Pools shall have a means of entry and exit in all shallow areas where the design water depth of the shallow area at the shallowest point exceeds 24 inches (610 mm).

## Over 30 Feet in Width

- Pools over 30 feet (9144 mm) in width at the deep area shall have an entry and exit on both sides of the deep area of the pool.

## Tread Dimension and Area

- Treads shall have a minimum unobstructed horizontal depth of 10 inches (254 mm) and a minimum unobstructed surface area of 240 square inches (0.15 m<sup>2</sup>).

## Riser Heights

- Risers, other than the top and bottom riser, shall have a uniform height of not greater than 12 inches (305 mm). The top riser height shall be any dimension not exceeding 12 inches (305 mm). The bottom riser height shall be any dimension not exceeding 12 inches (305 mm). The top and bottom riser heights shall not be required to be equal to each other or equal to the uniform riser height. Riser heights shall be measured at the horizontal centerline of the stairs.

## Maximum Depth

- The horizontal surface of underwater seats, benches and swim outs shall be not greater than 20 inches (508 mm) below the design water line.

## Rope and Float

- In pools where the point of first slope break occurs, a rope and float assembly shall be installed across the width of the pool. The rope assembly shall be located not less than 1 foot (305 mm) and not greater than 2 feet (610 mm) towards the shallow side of the slope break. Rope anchoring devices shall be permanently attached to the pool wall, coping or deck. Rope ends shall attach to the rope anchor devices so that the rope ends can be disconnected from the rope anchor device.

## **IN-GROUND SWIMMING POOLS (Chapter 8)**

### **Manufactured and Fabricated Diving Equipment (808)**

- Manufacturer's installations and labeling (808.1)

### **Special Features (809)**

- Pool stairs (tread size, riser height, bottom riser and additional steps) (809.5)

## **PERMANENT SPAS AND PERMANENT EXERCISE SPAS**

### **Pump and motor**

- Listed and labeled (502.1)

### **Structure and Design**

- Return and suction fittings (505)
- Water and temperature control (506)

## **PORTABLE SPAS AND PORTABLE EXERCISE SPAS**

- Listed and labeled (1001.3)

## **MECHANICAL**

### **Pool and Spa Heaters**

- Heater if installed (303.1.1)
- Time switches (303.1.2)
- Covers (303.1.3)
- Heater installation instructions and specifications (316.4)

## **PLUMBING**

### **Circulation Systems**

- Plastic pipe and fittings used shall be listed and labeled (Table 311.4 & Table 311.4.1)
  - Joints for circulation system per manufacturers installation.
- Maintain waterline or make-up water method