

2018 International Swimming Pool and Spa Code, ISPSC

with APSP-7 Standard for Suction Entrapment Avoidance

2018 IBC, WAC SECTION 3109.1 and 2018 IRC, WAC SECTION R328

IBC WAC 3109.1 and IRC WAC R328 General. The design and construction of swimming pools, spas, and other aquatic recreation facilities shall comply with the 2018 International Swimming Pool and Spa Code, if the facility is one of the following:

1. For the sole use of residents and invited guests at a single-family dwelling;
2. For the sole use of residents and invited guests of a duplex owned by the residents; or
3. Operated exclusively for physical therapy or rehabilitation and under the supervision of a licensed medical practitioner.

*All other “water recreation facilities” as defined in RCW 70.90.110 are regulated under ISPSC chapters 246-260 and 262 WAC.

305.1 General.

The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

Exceptions:

305.2 Outdoor swimming pools and spas.

Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7.

305.2.1 Barrier height and clearances.

Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches where measured on the side of the required barrier that faces away from the pool or spa.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches.

305.2.2 Openings.

Openings in the barrier shall not allow passage of a 4-inch-diameter sphere.

305.2.3 Solid barrier surfaces.

Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

305.2.5 Closely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1.75 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches in width.

305.2.6 Widely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed 1.75 inches.

305.2.7 Chain link dimensions.

The maximum opening formed by a chain link fence shall be not more than 1.75 inches. Where the fence is provided with slats fastened at the top and bottom which reduce the openings, such openings shall be not more than 1.75 inches.

305.2.8 Diagonal members.

Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not more than 1.75 inches. The angle of diagonal members shall be not greater than 45 degrees from vertical.

305.3 Gates.

Access gates shall comply with the requirements of Sections 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

305.3.1 Utility or service gates.

Gates not intended for pedestrian use, such as utility or service gates, shall remain locked when not in use.

305.3.2 Double or multiple gates.

Double gates or multiple gates shall have at least one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than 1/2 inch within 18 inches of the latch release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

305.3.3 Latches.

Where the release mechanism of the self-latching device is located less than 54 inches from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches below the top of the gate, and the gate and barrier shall not have openings greater than 1/2 inch within 18 inches of the release mechanism.

305.4 Structure wall as a barrier.

Where a wall of a dwelling or structure serves as part of the barrier and where doors or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches above the indoor finished floor and doors shall have an alarm that produces an audible warning when the window, door or their screens are 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 operable parts of the alarm deactivation switches shall be located 54 inches or more above the finished floor. In dwellings or structures required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches and not less than 48 inches above the finished floor.
2. A safety cover that is listed and labeled in accordance with ASTM F 1346 is installed for the pools and spas.
3. An approved means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

305.5 Onground residential pool structure as a barrier.

An onground residential pool wall structure or a barrier mounted on top of an onground residential pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches above grade for the entire perimeter of the pool, the wall complies with the requirements of Section 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4 inch diameter sphere.
5. Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

SECTION 310

SUCTION ENTRAPMENT AVOIDANCE

310.1 General.

Suction entrapment avoidance for pools and spas shall be provided in accordance with APSP 7 (see the following).

APSP-7, 5.1 General.

Methods to avoid entrapment in circulation systems, swim jet systems, alternative suction systems, and debris removal systems are shown in Sections 5.2 through 5.5.

4.3.1 Suction outlet certification

4.3.1.1 Manufactured suction outlet fitting assembly(ies).

When used, fully submerged suction outlet fitting assembly(ies) including cover/grate and associated fittings, fasteners and components shall be tested and certified by a third-party test lab accredited by the International Laboratory Accreditation Cooperation (ILAC) to test and certify products as conforming to ANSI/APSP-16.

4.3.1.2 Field fabricated suction outlet(s).

When used, field fabricated suction outlet cover/grate, sump, fasteners and assemblies shall be Certified by a Registered Design Professional as conforming to ANSI/APSP-16.

4.5 Skimmers.

Skimmers shall be vented to the atmosphere through openings in the lid, or through a separate vent pipe (see Figure 7).

4.5.1 Skimmer equalizer lines.

Skimmer equalizer lines shall not be used on new construction. Existing equalizer(s) shall comply with all submerged suction outlet requirements of this standard (see Figure 8).

4.6 Wall vacuum fitting(s).

When used, vacuum cleaner fitting(s) shall be located in an accessible position(s) no greater than 12 inches below the water level and the self closing, self latching fitting shall comply with IAPMO SPS 4. In addition, the vacuum piping shall be equipped with a valve to remain in the closed position when not in use.

5.3.1 Blockable outlets—dual separation.

Dual outlets shall be separated by a minimum of 3 feet measured from center to center of the suction outlet cover/grate (see Figures 9, 10, and 11) or located on two (2) different planes, i.e., one (1) on the bottom and one (1) on the vertical wall, or one (1) each on two (2) separate vertical walls. (See Figures 12 and 15). Suction outlets shall not be installed in seating areas

I HAVE READ THE INFORMATION ABOVE AND AGREE TO COMPLY:

Job Address: _____ Permit #: _____

Homeowner Name (please print): _____ Date: _____

Homeowner Signature: _____

Contractor Name: _____