

Comments to Florida Building Commission from Martin Aquatic Design and Engineering

After the second meeting of the Swimming Pool TAC, the TAC and Martin Aquatic agreed that a few of the items did not yet have the best possible language for inclusion in the 2023 Florida Building Code. We would like the following items added to the agenda for the meeting of the Florida Building Commission, they are listed by their originally assigned proposed modification number. Most of these comments include a suggestion for the final language that will address the concerns of the various stakeholders as expressed during that second meeting.

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SW9863

The TAC agrees that there should be a clearer division between the definition and requirements for a swimming pool slide vs the definition and requirements for a recreational slide. DOH has suggested that 30 gpm of flow be the dividing line, which is also the flow down the largest “small” slide we are aware of, the Vortex from SR Smith.

“Recreational Water Slide” means a flume that carries riders with more than 30 gallons per minute of flow down the flume.

...

“Swimming pool slide” is a slide designed by its manufacturer to discharge over the sidewall of a swimming pool, and which uses no more than 30 gallons per minute of water to carry the riders.

...

454.1.9.2 Recreational Water slides. Recreational Water slides shall terminate in either a plunge pool or run out lanes.

454.1.9.2.1 ~~Water slide~~ Plunge pool. Plunge pools shall be constructed...

...

454.1.9.2.1.6 Plunge pool decks.

454.1.9.2.1.6.1 Decking shall be provided at the entrance and exit points as necessary to provide safe patron access but shall not be smaller than 10 feet (3048 mm) in width and length. ~~Width. The minimum width of plunge pool decks along the exit side shall be 10 feet (3048 mm).~~

...

454.1.9.5.5 Decking shall comply with 454.1.9.2.1.6.1. ~~Decking shall be provided at the entrance and exit points as necessary to provide safe patron access but shall not be smaller than 10 feet (3048 mm) in width and length.~~ Additional decking along the ride course is not required except that decking shall be required at lifeguard locations and emergency exit points.

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SW9868

We want to keep the R1 language as-is. However we understand that DOH may comment asking for a reduction of the 50% figure to 30%. We ask that the figure remain 50% or as close to 50% as the Commission finds acceptable.

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SW9942

The A1 language was approved, however, by itself it will not have the desired effect. Currently, all pools with sun shelves must post a sign “Do not place furniture in the pool.” The TAC agrees that this blanket ban is overly harsh. The A1 language does not remove the signage requirement.

Here is how the code would read with the A1 language:

454.1.2.3.5

...

9. If the pool includes a sun shelf, “DO NOT PLACE FURNITURE IN POOL.”

...

454.1.2.6.4 Furniture that is non-corrosive, will not introduce contaminants into the pool water, and is acceptable to the health department may be placed in a pool. Means shall be taken to protect finish surfacing of the pool shell that is in contact with the furniture.

The original language proposed simply striking rule 9. The A1 language is aiming to draw a distinction between acceptable and unacceptable furniture. We think the adopted language should be as follows:

454.1.2.3.5

...

9. If the pool includes a sun shelf or a zero depth entry area, “DO NOT PLACE FURNITURE IN POOL.” Not required when all movable furniture on the deck or in the pool is entirely made from UV-resistant, inert plastic.

...

This language will ensure that the furniture does not damage the pool finish. This language also removes the need for the health department to review anything, and the possible subjectivity that would introduce. Inert plastic will be non-corrosive, as in the previous language, and it also will not introduce contaminants into the pool water.

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SW10190

We anticipate a comment from DOH regarding the safety of a pool that might have a sun shelf connecting to steps that go down to a 5 feet or deeper water. We do not believe steps are useful for getting into 5 feet of water, because few people's feet will touch the treads. We don't believe any designers are using pool steps this way and don't believe anything in the Code needs to speak to something that is not being done anywhere.

SW10202

The A3 language has been approved by the Swimming Pool TAC, however, there is a minor oversight both here and in the 2020 Code that is causing needless questions from DOH reviews. That is corrected with highlighted text below:

454.1.3.1.2

...

Where a perimeter overflowing edge is provided, up to 40 percent or 65 feet (19812 mm), whichever is less, of the wet deck may be lowered. Lowered portions of wet deck shall be at least 10 inches (254 mm) but not more than 36 inches (914 mm) below the pool water level or curb height. Lowered portions of wet deck shall be not more than 60 feet (18 288 mm) long and shall adjoin the rest of the wet deck via a set of stairs or a ramps at both each ends. If the lowered deck is adjacent to a transfer wall per 1009.4 of the *Florida Building Code, Accessibility*, one end of the lowered deck must be connected to the rest of the wet deck via an accessible route as described in 402 of the *Florida Building Code, Accessibility*.

...

454.1.6.5.3 System design. The design pattern of recirculation flow shall be 100 percent of the minimum turnover rate through the main drain piping and 100 percent of the minimum turnover rate through the perimeter overflow system, or **at least** 60 percent of the minimum turnover rate through the skimmer system.

...

454.1.9.10 Vanishing edge pools

454.1.9.10.1 Vanishing edge pools shall be designed and constructed within the limits of sound engineering practice and shall meet the requirements of Sections 454.1.1 through 454.1.6.5, unless specifically indicated otherwise.

454.1.9.10.2

Vanishing edges and associated discharge trough or catch basin shall be constructed of concrete or other structurally rigid impervious materials with a non-toxic, smooth and slip-resistant finish.

454.1.9.10.3

The vanishing edge shall discharge into a trough or basin. The trough or basin must be covered with a lid or secure grating that has the capacity to support a responder attending to a bather in distress on the opposite side of the vanishing edge. The trough or basin must be designed to deter access. The maximum height of the trough or basin wall above surrounding grade shall be 10 inches (254 mm). A lowered wet deck in accordance with 454.1.3.1 must be provided around the trough or basin and immediately adjacent to it.

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454.1.9.10.4

The vanishing edge length shall not exceed 65 feet (19 812 mm) or 40 percent of the pool perimeter, whichever is less. The maximum vertical distance from the top of the vanishing edge wall to the trough or catch basin cover or adjacent grade shall be 36 inches (914 mm). The maximum water depth in the pool at the vanishing edge wall shall be 4 feet (1219 mm). The vanishing edge wall shall not be considered as a perimeter deck obstruction. Water line tile at the top of the edge wall as required by 454.1.2.1(a) is not required to be non-skid.

454.1.9.10.5

Depth markings for vanishing edges shall be in accordance with 454.1.2.3.1(5).

454.1.9.10.6

The remainder of the pool perimeter must have perimeter overflow gutters per 454.1.6.5.3.1 or recessed automatic surface skimmers in accordance with 454.1.6.5.3.2. Alternatively, a combination of recessed automatic surface skimmers and perimeter overflow gutters may be used along the remainder of the perimeter, such that parts of the perimeter without perimeter overflow gutters or vanishing edges shall have skimmers spaced every 20 feet (6096 mm) or less, regardless of the width or area of the pool.

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SW10211

We want the originally submitted language to be adopted, along with A1. Both should be adopted for consistency. However, A1 has a minor error that needs to be corrected before being adopted. The minor error is in the women's water closet requirement. The corrected A1 is below with the minor error highlighted in yellow:

454.1.6.1 Sanitary facilities. ~~Swimming pools with a bathing load of 20 persons or less may utilize a unisex restroom. Pools with bathing loads of 40 persons or less may utilize two unisex restrooms or meet the requirements of Table 454.1.6.1. Unisex r~~Restrooms shall meet all the requirements for materials, drainage and signage as indicated in Sections 454.1.6.1.1 through 454.1.6.1.4. Each shall include a water closet, a diaper change table, a urinal and a lavatory. ~~Pools with a bathing load larger than 40 persons shall provide separate sanitary facilities labeled for each sex.~~ The entry doors of all restrooms shall be located within a 200-foot (60 960 mm) walking distance of the nearest water's edge of each pool served by the facilities.

Exception: Where a swimming pool serves only a designated group of residential dwelling units including hotel rooms and not the general public, poolside sanitary facilities are not required if all living units are within a 200-foot (60 960 mm) horizontal radius of the nearest water's edge, are not over three stories in height unless serviced by an elevator, and are each equipped with private sanitary facilities.

454.1.6.1.1 Required fixtures. Fixtures shall be provided as indicated on Table 454.1.6.1, rounded up to the next whole number. The fixture count on this chart is deemed to be adequate for the pool and pool deck area that is up to three times the area of the pool surface provided. ~~When multiple fixture sets are required and separate facilities are provided for each sex, the fixtures used in ancillary family-style restrooms can be used to meet the requirements of this section.~~

~~One diaper changing table shall be provided at each restroom. Diaper changing tables are not required at restrooms where all pools served are restricted to adult use only. Swim diapers are recommended for use by children that are not toilet trained. Persons that are ill with diarrhea cannot enter the pool.~~

Exception: When a public swimming pool meets all of the following conditions the following shall apply:

~~The pool serves only a designated group of dwelling units,~~

~~The pool is not for the use of the general public, and~~

~~A building provides sanitary facilities;~~

~~The fixture requirement for the building shall be determined and if it exceeds the requirement in Table 454.1.6.1 then the building requirement shall regulate the fixture count, otherwise the~~

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~~fixture count shall be based on the requirement for the pool. Under no circumstances shall the fixture counts be cumulative.~~

TABLE 454.1.6.1

PUBLIC SWIMMING POOL—REQUIRED FIXTURE COUNT PER SQUARE FOOT OF POOL SURFACE

SIZE OF POOL (square feet)	MEN'S RESTROOM			WOMEN'S RESTROOM	
	Urinals	WC	Lavatory	WC	Lavatory
0—2,500	4	1 per 2,500 for first 10,000, 1 per 5,000 for remainder exceeding 10,000	1 per 5,000 for first 10,000, 1 per 10,000 for remainder exceeding 10,000	1 per 1,250 for first 10,000, 1 per 2,500 for remainder exceeding 10,000	1 per 5,000 for first 10,000, 1 per 10,000 for remainder exceeding 10,000
2,501—5,000	2	4	4	5	4
5,001—7,500	2	2	2	6	2
7,501—10,000	3	2	3	8	3

For SI: 1 square foot = 0.0929 m2.

~~Note: Square footage of interactive water features (IWFs) is required to be included when calculating the size of pool for the purposes of determining the type and number of fixtures for the sanitary facilities. For those facilities with an IWF in addition to the pool, causing the combined pool size square footage to exceed the threshold required category fixture count, a unisex restroom may be installed to satisfy the fixture requirement for every additional 1,250 square feet or fraction thereof. The IWF feature flow for one unisex restroom shall not exceed 100 gpm, nor shall bathing load exceed 20 patrons.~~

~~An additional set of fixtures shall be provided in the men's restroom for every 7,500 square feet (697 m2) or major fraction thereof for pools greater than 10,000 square feet (929 m2).~~

~~Women's restrooms shall have a ratio of three to two water closets provided for women as the combined total of water closets and urinals provided for men.~~

~~Lavatory counts shall be equal.~~

SW10323

The Swimming Pool TAC agrees with the A2 language, however the Plumbing Code TAC disagreed with it. One said that lumping baptistries in with pools would be burdensome to small churches. We would reply that we do not think it is common for churches with permanently installed and connected baptistries in Florida to be over other buildings, especially not small churches. Another said that this section 423.1 was intended to discuss backflow only. We can address both of these concerns by leaving 423.1 in the plumbing code alone, and adding the provisions we want to a new section that does not address baptistries:

Florida Plumbing Code

423.1 Water connections.

Baptisteries, ornamental and lily pools, aquariums, ornamental fountain basins, swimming pools, and similar constructions, where provided with water supplies, shall be protected against backflow in accordance with Section 608.

...

423.4 Secondary Waterproofing

Where installed over a building (as defined in the Florida Building Code), large permanent water retaining constructions such as ornamental basins, spas, and swimming pools shall be installed over a waterproof surface that slopes to drains with access to as defined herein, such that if the construction ever leaks, the leaking water will be conveyed away from the building structure or structures below, and no water can be impounded.

...

Florida Building Code 454

"Elevated pool" means any pool regulated under this section which is installed over a building (as defined in the Florida Building Code), including any associated troughs, gutters, or tanks.

454.1.2.1 Pool structure.

Pools shall be constructed of concrete or other impervious and structurally rigid material. All pools shall be watertight, shall be free from structural cracks and shall have a nontoxic smooth and slip-resistant finish. All elevated pools constructed of concrete shall have waterproofing integral to the mix, or applied over the surface prior to the final surface application. All materials shall be installed in accordance with manufacturer's specifications unless such specifications violate Chapter 64E-9, Florida Administrative Code, rule requirements or the approval criteria of NSF/ANSI Standard 50 or NSF/ANSI Standard 60.

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SW10385

We want to ensure that A1 and the original language are both enacted. The result should be

454.1.9.2.2.1 Run out lanes may be utilized in lieu of or within a plunge pool system, provided they are constructed to the slide manufacturer's specifications and are approved by the design engineer of record.

454.1.9.2.2.2 Five-foot-wide (1524 mm) walkways shall be provided adjacent to run out lanes, as either dry deck or as part of a pool with up to 12 inches (305 mm) of water depth in this area. The five foot walkway need only be on one side of the run out lane.