Tracking Chart – Swimming Pool TAC

Mod #	Proponent	Chapter	Section	Summary	No Affirmative Recommendation
7222	Robert Cohen	4	454	Change section 454.1.4.2.3 from that in the 2017 FBC back to that in the 2014 FBC	

Commission Action

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Comment

☐ 1. Support comment. Comment sufficiently addresses the TAC's concern(s).

☐ 3. No comment is needed.

☒ 2. Do Not Support comment. Comment does not address the TAC's concern(s).

☐ 4. Straw Poll.

A4

0 Yes – 8 No

SW7222

Date Submitted	11/8/2018	**Section**	454	**Proponent**	Robert Cohen
Chapter	4	**Affects HVHZ**	No	**Attachments**	No

TAC Recommendation No Affirmative Recommendation
Commission Action Pending Review

Comments

General Comments No

Alternate Language Yes

Related Modifications

none

Summary of Modification

Change section 454.1.4.2.3 from that in the 2017 FBC back to that in the 2014 FBC

Rationale

There are NO requirements in Chapter 27 of the 2017 FBC specific to swimming pool underwater luminaires.
The wording of the 2014 FRC is more complete and specifically makes it much easier to determine that LED or similar luminaires are acceptable.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

Much easier to determine acceptability of alternate (LED) luminaires for underwater swimming pool lighting.

Impact to building and property owners relative to cost of compliance with code

None or reduced.

Impact to industry relative to the cost of compliance with code

None or reduced

Impact to small business relative to the cost of compliance with code

None or reduced

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provide better safety for underwater swimming pool lighting.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Makes it much easier to determine Code compliance of alternate luminiaires.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

None. Provides for alternate products

Does not degrade the effectiveness of the code

NO, it improves it.

Alternate Language

2nd Comment Period

7222-A4

Proponent Robert Cohen **Submitted** 4/25/2019 **Attachments** Yes

Rationale

Reinstate significant life safety requirements that were in the 2014 and several prior codes but deleted from the 2017 Code

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

none These requirements have been enforced for a number of years.

Impact to building and property owners relative to cost of compliance with code

None. Clarifies lighting details.

Impact to industry relative to the cost of compliance with code

Reduced cost if alternate luminaires and used and deletes some requirements for engineering certification compared to prior codes.

Impact to Small Business relative to the cost of compliance with code

None or reduced

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Yes

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Yes

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Yes

Does not degrade the effectiveness of the code

Yes

Alternate Language

1st Comment Period History

7222-A1

Proponent Robert Cohen **Submitted** 2/18/2019 **Attachments** Yes

Rationale

Revised proposed change 7222 in response to comments G1 and G2.

Fiscal Impact Statement

Impact to local entity relative to enforcement of code

none - reverts to 2014 level of requirements

Impact to building and property owners relative to cost of compliance with code

unknown - reverts to 2014 level of requirements

Impact to industry relative to the cost of compliance with code

unknown - reverts to 2014 level of requirements

Impact to Small Business relative to the cost of compliance with code

None or reduced

Requirements

Has a reasonable and substantial connection with the health, safety, and welfare of the general public

Provides for outdoor night swimming and indoor swimming life safety protections as in the 2014 FBC and years of prior practice in Florida.

Strengthens or improves the code, and provides equivalent or better products, methods, or systems of construction

Provides for outdoor night swimming and indoor swimming life safety protections as in the 2014 FBC and years of prior practice in Florida.

Does not discriminate against materials, products, methods, or systems of construction of demonstrated capabilities

Yes - incorporates easier rules for alternate luminaires

Does not degrade the effectiveness of the code

no

1st Comment Period History

SW7222-G1

Proponent Kari Hebrank **Submitted** 2/13/2019 **Attachments** No

Comment:

The Florida Swimming Pool Association is OPPOSED to this code proposal which would revert to the 2014 FBC underwater lighting standards.

1st Comment Period History

SW7222-G2

Proponent James LePetrie **Submitted** 2/15/2019 **Attachments** No

Comment:

If this passes there ought to be language for LED lights that allows depth of submersion to be according to manufacturer's specifications. 18" is not necessary for these types of lights.

Revise Sections 454.1.4.2.1, 454.1.4.2.2 and 454.1.4.2.3 as follows:

454.1.4.2.1 Outdoor pool lighting. Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of ~~1/2~~0.5 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.5 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided.

454.1.4.2.2 Indoor pool lighting. Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of ~~8/10~~ 0.8 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.8 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided..

454.1.4.2.3 Underwater lighting. Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be as specified in 454.1.4.2.1 or 454.1.4.2.2 and shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements ~~can~~ may be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.

My comment is fairly simple and clarifies that ONLY the Alternate Language as in proposed Mod SW7222-A1 is what I now propose.

Revise Sections 454.1.4.2.1, 454.1.4.2.2 and 454.1.4.2.3 as follows:

454.1.4.2.1 Outdoor pool lighting. Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of ~~1/2~~0.5 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.5 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided.

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454.1.4.2.3 Underwater lighting. Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be as specified in 454.1.4.2.1 or 454.1.4.2.2 and shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements ~~can~~ may be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.

454.1.4.2.3 Underwater lighting. ~~Underwater luminaires shall comply with Chapter 27 of the Florida Building Code, Building. The location of the underwater luminaires shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.~~

Underwater lighting shall utilize transformers and low-voltage circuits with each underwater light being grounded. The maximum voltage for each light shall be 15 volts and the maximum incandescent lamp size shall be 300 watts. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter. All underwater lights which depend upon submersion for safe operation shall have protection from overheating when not submerged. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface. Alternative lighting systems which use 15 volts or less, or use no electricity in the pool or on the pool deck, such as LED (light emitting diode) fiber-optic systems, may be utilized if the manufactures specifications provide for the equivalency in watt output.

Comment response re: mod 7222-G1. February 18, 2019 robert.cohen92023@gmail.com 703-618-1753

FBC 2014	FBC 2017	PROPOSED FBC 2020	PROPOSED CHANGES from 2017 to 2020
454.1.4 Electrical systems.	**454.1.4 Electrical systems.**	**454.1.4 Electrical systems.**	**none**
454.1.4.1 Electrical equipment and wiring. Electrical equipment wiring and installation, including the grounding of pool components shall conform with Chapter 27 of this code.	**454.1.4.1 Electrical equipment and wiring.** Electrical equipment wiring and installation, including the grounding of pool components shall conform with Chapter 27 of this code.	**454.1.4.1 Electrical equipment and wiring.** Electrical equipment wiring and installation, including the grounding of pool components shall conform with Chapter 27 of this code.	**none**
454.1.4.2 Lighting. Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.	**454.1.4.2 Lighting.** Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.	**454.1.4.2 Lighting.** Artificial lighting shall be provided at all swimming pools which are to be used at night or which do not have adequate natural lighting so that all portions of the pool, including the bottom, may be readily seen without glare.	**none**
454.1.4.2.1 Outdoor pool lighting. Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 1/2 watt per square foot of pool water surface area.	**454.1.4.2.1 Outdoor pool lighting.** Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 1/2 watt per square foot of pool water surface area.	**454.1.4.2.1 Outdoor pool lighting.** Lighting shall provide a minimum of 3 footcandles (30 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of 1/2 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.5 watt per square foot or where a professional	**Revised to be equivalent to underwater illumination levels as in the 2014 and 2017 FBC and as suggested by Mod comments 7222-G1 and G2.**

		engineer certifies that the equivalent illumination will be provided.	
454.1.4.2.2 Indoor pool lighting. Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 8/10 watt per square foot of pool surface area.	**454.1.4.2.2 Indoor pool lighting.** Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. Underwater lighting shall be a minimum of 8/10 watt per square foot of pool surface area.	**454.1.4.2.2 Indoor pool lighting.** Lighting shall provide a minimum of 10 foot candles (100 lux) of illumination at the pool water surface and the pool wet deck surface. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal operating water level determined by the center-line of the skimmer or top lip of the gutter or as required or recommended by the luminaire manufacturer. Underwater lighting shall be a minimum of 8/10 watt per square foot of pool water surface area when incandescent luminaires are used. Alternative lighting systems such as LED (light emitting diode) or fiber-optic systems, may be utilized if the manufacturer's specifications provide for the equivalency to incandescent illumination provided at 0.8 watt per square foot or where a professional engineer certifies that the equivalent illumination will be provided..	**Revised to be equivalent to underwater illumination levels as in the 2014 and 2017 FBC and as suggested by Mod comments 7222-G1 and G2.**
454.1.4.2.3 Underwater lighting. Underwater lighting shall utilize transformers and low-voltage circuits with each underwater light being grounded. The maximum voltage for each light shall be 15 volts and the maximum incandescent lamp size shall be 300 watts. The location of the underwater lights shall be such that the underwater illumination is as uniform as possible and shall not be less than 18 inches (457 mm) below the normal	**454.1.4.2.3 Underwater lighting.** Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface.	**454.1.4.2.3 Underwater lighting.** Underwater luminaires shall comply with Chapter 27 of the *Florida Building Code, Building*. The location of the underwater luminaires shall be as specified in 454.1.4.2.1 or 454.1.4.2.2 and shall be such that the underwater illumination is as uniform as possible. Underwater lighting requirements ~~can~~ may be waived when the overhead lighting provides at least 15 footcandles	**Revised to add cross references.**

operating water level determined by the center-line of the skimmer or top lip of the gutter. All underwater lights which depend upon submersion for safe operation shall have protection from overheating when not submerged. Underwater lighting requirements can be waived when the overhead lighting provides at least 15 footcandles (150 lux) of illumination at the pool water surface and pool wet deck surface. Alternative lighting systems which use 15 volts or less, or use no electricity in the pool or on the pool deck, such as LED (light emitting diode) fiber-optic systems, may be utilized if the manufactures specifications provide for the equivalency in watt output.		(150 lux) of illumination at the pool water surface and pool wet deck surface.	
454.1.4.2.4 Overhead wiring. Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation, including the grounding of pool components, shall comply with Chapter 27 of this code.	**454.1.4.2.4 Overhead wiring.** Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation including the grounding of pool components shall comply with Chapter 27 of the *Florida Building Code, Building*.	**454.1.4.2.4 Overhead wiring.** Overhead service wiring shall not pass within an area extending a distance of 10 feet (3048 mm) horizontally away from the inside edge of the pool walls, diving structures, observation stands, towers or platforms. Allowances for overhead conductor clearances to pools that meet the safety standards in the *National Electrical Code* may be used instead. Electrical equipment wiring and installation including the grounding of pool components shall comply with Chapter 27 of the *Florida Building Code, Building*.	