

1 Exam Prep
NFPA 70 – National Electrical Code, 2014
Tabs and Highlights
(State Pool Contractors Only)

These 1 Exam Prep Tabs are based on the *NFPA 70 – National Electrical Code, 2014*.

Each tabs sheet has five rows of tabs. Start with the first tab at the first row at the top of the page; proceed down that row placing the tabs at the locations listed below. Place each tab in your document, manual, or book setting it down one notch until you get to the last tab. Then start with the highlights.

| <u>1 Exam Prep Tab</u> | <u>Page #</u> |
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| Definitions | 70-604 |
| Electric Pool Water Heaters | 70-606 |
| Motors | 70-608 |
| Receptacles/ Light Fixtures | 70-608 |
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| Metal Fittings | 70-613 |
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This concludes the tabs for this document. Please continue with the highlights on the following page.

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|-------------|----------------|---|
| 70-604 | 680.2 | Definitions |
| 70-605 | | Low voltage contact limit: (highlight definition) |
| | | Permanently Installed Swimming, Wading, Immersion, & Therapeutic Pools Stationary: (highlight definition) |
| | | Storable Swimming, Wading, or Immersion Pools; or Storable/Portable Spas and Hot Tubs: (highlight definition) |
| | | Wet-Niche Luminaire: (highlight definition) |
| 70-606 | Table 680.3 | Other Articles |
| | 680.7 | Cord and Plug-Connected Equipment |
| | 680.7(A) | Length: For other than storable pools, the flexible cord shall not exceed 900 mm (3 ft.) in length. |
| | 680.7(B) | Equipment Grounding: but not smaller than 12 AWG |
| 70-606 | 680.9 | Electric Pool Water Heaters: not over 60 amperes. Shall not be less than 125 percent of the total nameplate rated load. |
| 70-607 | 680.10 | Underground Wiring Location: (Highlight entire paragraph) |
| | Table 680.10 | Minimum Cover Depths |
| 70-608 | 680.21 | Motors |
| | 680.21(A) | Wiring Methods |
| | 680.21(A)(1) | General: Any wiring method employed shall contain an ... but not smaller than 12 AWG. |
| | 680.21(A)(5) | Cord-and-Plug Connections: but not smaller than 12 AWG. The cord shall terminate in a grounding type attachment plug. |
| | 680.21(C) | GCFI Protection: (Highlight entire paragraph) |
| | 680.22 | Lighting, Receptacles, and Equipment |
| | 680.22(A) | Receptacles |
| | 680.22(A)(1) | Required Receptacle Location: (Highlight entire paragraph) |
| | 680.22(A)(2) | Circulation and sanitation System Location: (Highlight entire paragraph including 1-3) |
| | 680.22(A)(4) | GFCI Protection: (Highlight entire paragraph) |

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| 70-608 | 680.22(B) | Luminaries, Lighting Outlets, and Ceiling Suspended (Paddle Fans) |
| 70-609 | 680.22(B)(6) | Low-Voltage Luminaries: (Highlight entire paragraph) |
| | 680.22(D) | Other Outlets: (Highlight entire paragraph) |
| | 680.23 | Underwater Luminaries |
| | 680.23(A)(3) | GFCI Protection, Relamping: (Highlight entire paragraph) |
| | 680.23(A)(5) | Location, Wall Mounted Luminaires: top of the luminaire lens not less than 450 mm (18 in.) below the normal water level of the pool. No luminaire shall be installed less than 100 mm (4 in.) below the normal water level of the pool. |
| | 680.23(6) | Bottom-Mounted Luminaires: (1) have the lens guarded to prevent contact by any person. |
| | 680.23(B) | Wet-Nice Luminaires |
| 70-610 | 680.23(B)(3) | Equipment Grounding Provisions for Cords: The grounding conductor shall not be smaller than the supply conductors and not smaller than the supply conductors. |
| | 680.23(F) | Branch-Circuit Wiring: Exception: Where connecting to transformers for pool lights ...exceed 3.0 m (10 ft.) in total length used. |
| 70-611 | 680.23(F)(2) | Equipment Grounding: Exception: An equipment grounding conductor between the wiring chamber ... the overcurrent device in this circuit. |
| | 680.24 | Junction Boxes and Electrical Enclosures for Transformers or Ground-Fault Circuit Interrupters. |
| | 680.24(A) | Junction Boxes |
| | 680.24(A)(2) | Installation: (a) Vertical Spacing - (Highlight entire paragraph) (b) Horizontal Spacing - (Highlight entire paragraph) (c) Flush Deck Box - (Highlight entire paragraph including 1-2) |
| 70-612 | 680.24(B) | Other Enclosures |
| | 380.24(B)(2) | Installation: (a) Vertical Spacing - (Highlight entire paragraph) (b) Horizontal Spacing - (Highlight entire paragraph) |

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| 70-612 | 680.25 | Feeders |
| | 680.25(B) | Grounding |
| | 680.25(B)(1) | Size: this conductor shall be sized in accordance with 250.30(a)(3) but not smaller than 8 AWG. |
| | 680.26 | Equipotential Bonding |
| | 680.26(B) | Bonded Parts: An 8 AWG or larger solid copper bonding conductor ... service equipment, or electrodes. |
| | 680.26(B)(1) | Conductive Pool Shells |
| 70-613 | 680.26(B)(1)(b) | Copper Conductor Grid - (Highlight entire paragraph including 1 -4) |
| | 680.26(B)(2) | Perimeter Surfaces: The perimeter surface shall extend for 1 m (3 ft.) ... poured concrete surfaces and other types of paving. Conductor grid at minimum of four (4) points uniformly |
| | 680.26(B)(2)(a) | Structural Reinforcing Steel |
| | 680.26(B)(2)(b) | Alternate Means |
| | 680.26(B)(2)(b)(1) | At least one minimum 8 AWG bare solid copper conductor shall be provided. |
| | 680.26(B)(4) | Underwater Lighting: Exception: Listed low-voltage lighting systems with non-metallic forming shells shall not require bonding. |
| 70-614 | 680.26(C) | Pool Water: (Highlight entire paragraph) |
| | 680.27 | Specialized Pool Equipment |
| | 680.27(A) | Underwater Audio Equipment: Underwater Audio Equipment: All underwater audio equipment shall be identified. |
| | 680.27(A)(2) | Wiring Methods: The termination of the 8 AWG bonding jumper in the forming ... deteriorating effect of pool water. |
| | 680.27(B) | Electrically Operated Pool Covers |
| | 680.27 (B)(1) | Motors and Controllers: The electric motors, controllers, and wiring shall be located not less than 1.5 m (5 ft) from the inside wall of the pool. |
| | 680.27 (B)(2) | Protection: (Highlight entire paragraph) |

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| 70-614 | 680.32 | Ground-Fault Circuit Interrupters Required |
| 70-615 | | All 125-volt, 15- and 20-ampere receptacles located within 6.0 m (20 ft.) ... or other effective barrier. |
| | IV. | Spas and Hot Tubs |
| | 680.42 | Outdoor Installations |
| | 680.42 (A)(1) | Flexible Conduit: Liquidtight flexible metal conduit ... shall be permitted. |
| | 680.42(B) | Bonding: Equipotential bonding of perimeter surfaces in accordance with ...the following condition apply: (Highlight (1) – (4)) |
| 70-616 | 680.43 | Indoor Installations |
| | 680.43(A) | Receptacles: (Highlight entire paragraph) |
| | 680.43(A)(2) | Protection, General: (Highlight entire paragraph) |
| | 680.43(B) | Installation of Luminaires, Lighting outlets, and Ceiling-Suspended (Paddle) Fans) |
| | 680.43(B)(1) | Elevation |
| | 680.43(D) | Bonding |
| | 680.43(D)(4) | All metal surface that are within 1.5 m (5 ft) ... by permanent barrier. |
| 70-617 | 680.43(E) | Methods of Bonding: (Highlight entire paragraph including (1) – (3)) |
| | V | Fountains |
| | 680.51 | Luminaires, Submersible Pumps, and Other Submersible Equipment |
| | 680.51(A) | Ground-Fault Circuit Interrupter |
| | 680.51(B) | Operating Voltage |
| 70-618 | 680.54 | Grounding: The following equipment shall be grounded: |
| | 680.54(1) | Other than listed low-voltage luminaires not requiring ... of the inside wall of the fountain. |
| 70-619 | VI | Pools and Tubs for Therapeutic Use |
| | 680.62 | Therapeutic Tubs |

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| | 680.62(C) | Methods of Bonding (Highlight entire paragraph including (1) – (4)) |
| | 680.62(D) | Grounding |
| | 680.62(D)(a) | Location: All electrical equipment located within 1.5 m (5 ft) of the inside wall of the tub shall be connected to the equipment grounding conductor. |
| | VII | Hydromassage Bathtubs |
| 70-620 | 680.74 | <p>Bonding: a solid copper bonding jumper, insulated, covered, or bare not smaller than 8 AWG.</p> <p>The bonding jumper shall not be required to be connected to a double insulated circulating pump motor. ... when a double-insulated circulating pump motor is used.</p> |