



# Borough of Mechanicsburg

*"A Good Place to Live"*

Residential Swimming Pools can provide a wonderful place for family and friends to join for fun, but they can also be extremely dangerous if installed incorrectly, or if proper safety measures are not followed. Therefore, installation of Swimming Pools should be taken very seriously.

This municipality ALWAYS expects to see the following checklist completed at time of Building Permit Application whether installation is to be performed by home owner or professionally. Failure to remit any one of the following (without having discussed the issue previously) will be cause for rejection of project, which will be returned to the applicant as incomplete and non-compliant.

**Every Pool Application must have this Checklist Completed**

## Swimming Pool - Building Permit Application Checklist

REQUIRED INFORMATION (See attached guide)	YES	NO	N/A	COMMENTS
Applicant has reviewed attached swimming pool guide?				
Pool info/pump, heater, lighting, etc...				
Electric burial depth				
Wiring methods				
GFCI receptacle locations				
Perimeter bonding methods				
Water bonding methods				
Water depth (above-ground pools)				
Fence (in-ground pools)				
Ladder (above-ground pools)				
Door alarm				
<b>Building Permit Application submitted to Codes</b>				
<b>Dept. with all supporting documentation on Pool</b>				

**(Swimming Pool Guide follows on pages 2-5)**

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## **New Residential 2015 IRC & ISPSC – Pools, Spas & Hot Tub Requirements** (Any swimming pool that can contain water 24" or deeper requires a building permit & inspections)

### **Definitions:**

- Swimming Pool:
  - Any structure intended for swimming or recreational bathing that contains water 24" or deeper.
- Pool Types:
  - In-Ground
  - On ground - Storable Pool (Metal, fiberglass, flexible walls) Pool walls that are 42" max height or less.
  - Permanent Pool – Any pool walls over 42" height is considered permanent.

### **2015 IRC ELECTRICAL REQUIREMENTS FOR PERMANENT POOLS:**

- E4202.2: Flexible Cords for permanent pools only, shall be **3'** Max in length, fixed or stationary equipment can be cord connected (exempt for underwater luminaires).
- E4203.1.1 Receptacles supplying power to circulation / sanitation equipment **are allowed** to be located **6'-10'** from pool walls. Shall be a single receptacle of locking type, grounded, and GFCI protected. All other receptacles required shall be no closer than **6'** from pool walls.
- E4203.1.2 Minimum of one **15 or 20-amp, 120 V** receptacle (other than pool pump equipment receptacle) supplied by general purpose branch circuit **is required** from **6'-20'** from pool edge and located no more than **6'-6"** above pool grade level / deck.
- E4203.1.3 GFCI protection required for all outdoor receptacles, including pool pump motor receptacles.
- E4203.2 Switching devices shall be located no less than **5'** from pool edge, unless separated by permanent barrier such as a fence or wall.
- E4203.3 At least one disconnecting means for all utilization equipment other than lighting, shall be readily accessible and within sight (**50' max**) of the served equipment. The disconnect shall be a minimum of **5'** from pool edge, unless separated from water by permanent barrier requiring a **5'** or greater reach path.
- E4203.4.1 Luminaires, Lighting outlets and suspended paddle fans shall not be installed over pool or within **5'** from pool edge, unless fixture is **12'** or more above the water level.
- E4203.4.4 Existing lighting outlets/luminaires located within **5'** of pool edge, must be rigidly attached to existing structure, located no less than **5'** above maximum water level, and GFCI Protected. Luminaires / lighting outlets installed between **5'-10'** from pool edge require GFCI protection, unless rigidly attached to the structure and no less than **5'** above maximum water level.



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- E4203.6 Overhead Service Drop Conductors and any other open overhead wiring shall not be installed above:
- Pools and areas extending not less than 10 feet horizontally from the inside of the walls of the pool.
  - Diving Structures or platforms and areas extending not less than 10 feet horizontally from the outer edge of such structures.
    - Except service drop conductors are allowed above pool or within **10'** of pool edge, when at least **22.5'** away from maximum water height measured in any direction, and **14.5'** above a diving platform measured in any direction.
  - Only Cable TV and Telephone lines are allowed to be a minimum of **10'** above pool or diving platforms.
- E4203.7 Underground wiring installed within **5'** from pool edge must be installed in a complete raceway of RMC, IMC, or nonmetallic raceway.
- Burial Depths:
    - RMC = **6"**
    - IMC = **6"**
    - Nonmetallic Raceway = **18"**
- E4204.2 Bonding is required to be by minimum **#8 bare**, insulated, or covered solid copper conductors.
- Connections shall be made by Pressure Connectors or Clamps of:
    - Stainless Steel
    - Brass
    - Copper
    - Copper Alloy
  - Bonding connections shall not be by solder or sheet metal screws.
  - Structural Steel shall be bonded together by steel wire ties or equivalent, and inspected prior to concealment.
  - Perimeter Surface must extend **3'** minimum beyond the pool walls and shall include unpaved surfaces, poured concrete or other paving types.
  - Perimeter surfaces consisting of buried rebar or welded wire mesh shall be attached to pool structural steel at a minimum of **4 points**, evenly spaced around pool perimeter.
  - Perimeter surfaces that do not consist of buried rebar or welded wire mesh, must meet the following:
    - Minimum of one **#8 bare** solid copper conductor is required.
    - Follow contours of perimeter
    - Located **18"-24"** from pool walls.
    - Located **4"-6"** below the sub-grade.
    - Attached to pool structure at a minimum of **4** evenly spaced points.
  - All metallic parts of pool structure including structural steel are to be bonded.
  - All metal shells of underwater luminaires shall be bonded.
  - All metal fittings within or attached to pool structure shall be bonded, including handrails, ladders, etc.
  - All fixed metal parts located within **5'** of edge of the pool wall shall be bonded.



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E4204.3 Pool water shall be intentionally bonded by **9 Sq. In** of a conductive surface in contact with pool water, such as ladders Lighting, components, Drain bodies, etc.

## 2015 International Swimming Pool and Spa Code (ISPSC) Inground Pool Requirements

### 305.1 – Barriers (Fencing) & Alarms

- Minimum height of **48"** above grade measured on outside of barrier. Such height shall exist for 3 feet measured horizontally from the outside of the barrier.
- Maximum distance between grade and barrier bottom is **2" for grass or gravel and 4" for solid surface such as concrete.**
- Openings shall not allow a **4"** sphere to pass through
- Solid Barriers shall be constructed without indentations.
- Maximum chain link fence size shall be **1.75"** square.
- Shall be located to prohibit equipment/objects from being used to climb them. (**3 ft.** min. clearance)
- If less than **45"** between horizontal bars, then horizontal bars must be on pool side and spindle spacing must not exceed **1.75"**.
- Mesh fences shall be installed in accordance with the manufacturer's instructions, bottom of mesh fence shall be not more than 1" above grade, and flex not more than 4" from grade. Attachment devices shall be installed no lower than 45" above grade.
- Dwelling walls that contain operable windows having a sill height of less than 48" above the indoor finished floor and doors with direct access to pool shall be equipped with an audible alarm that sounds when the door is opened, with a deactivation switch located **54"** minimum above the door threshold. Alarms must be **UL 2017** listed. **OR** The pool shall be equipped with a powered safety cover in compliance with **ASTM F 1346.**

### 305.3 – Access Gates:

- Gates shall be self-closing and self-latching, and open away from the pool.
- Release mechanisms shall either be located on the outside of the gate at least **54"** minimum from the bottom of grade or all of the following:
  - Located on the pool side at least **3"** below top of gate
  - There shall be no openings larger than **½"** within **18"** of the release mechanism.

### 310.1 – Suction outlets shall comply with **ANSI/APAP-7**

313.8- Pump motors shall comply with **UL 1004-1, UL 1081, CSA C22.2 No. 108,** or the relevant motor requirements of **UL 1563 or CSA C22.2 No. 218.1**

## 2015SC On ground Pool

305.5.1 -An on ground residential pool wall structure or a barrier mounted on top of an on ground residential pool wall structure shall serve as a barrier where the bottom of the pool wall is on grade, the top of the pool wall is not less than **48 inches** above grade for the entire perimeter of the pool, and the pool manufacturer allows the wall to serve as a barrier.

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305.5.3- Ladders or steps used as means of access to the pool must be capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier.

702 - Ladders must be of Types A-E ladder design.

704.7 - Pool Pumps must comply with **UL 1081**

705 - Safety signs from the manufacturer such as "**NO DIVING**" or Entrapment warning labels must be posted in accordance with the manufacturer's instructions prior to final inspection.

**The Borough of Mechanicsburg Building Department recognizes that certain pools require to be partially filled with water in order to properly fit the liner, when this situation occurs, temporary construction fencing a minimum 48" in height with adequate supports every 4 feet must be installed prior to any water being added to the pool, unless the permanent code compliant barrier is already installed. Temporary fencing shall remain in place until permanent code compliant pool barriers are completely installed.** Revised June 6, 2019